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THE JOURNAL OF CUTANEOUS DISEASES

INCLUDING SYPHILIS

Official Organ of
The American Dermatological Association

GEORGE M. MacKEE, M.D., NEW YORK

Editor

FRED WISE, M.D., NEW YORK

Associate Editor

VOL. XXXII

1914



REBMAN COMPANY

HERALD SQUARE BUILDING

141-145 WEST 36TH STREET, NEW YORK

422398
19,4,44

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REBMAN COMPANY
NEW YORK

PRINTED IN AMERICA

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THE JOURNAL OF CUTANEOUS DISEASES

VOL. XXXII

JANUARY, 1914

NO. 1

EDITORIAL.

SALVARSAN IN THE TREATMENT OF SYPHILIS.

OWING to the number and conflicting character of the statements regarding the value of salvarsan in the treatment of syphilis, it is difficult to obtain a clear insight into what it really has accomplished and what we may reasonably hope to accomplish by its rational employment.

In order to formulate and carry out a successful treatment of the disease, it is necessary to have a proper conception of what the infection in itself may bring about and what was accomplished by the older methods of treatment.

A proper mental picture of syphilis cannot be obtained from a one-sided view of the disease, such as the study of the primary lesion and the secondary manifestations on the skin or mucosa, but from the viewpoint of a general infection. It is worth while to study the variations presented by the primary focus of infection and the multiform character of the eruption, but we must go beyond this and think of the disease as a general one which produces its most serious results on the nervous system, the vascular apparatus and the eye. It must furthermore be borne in mind that syphilis in its early stages invades all the tissues and may cause gross lesions with objective manifestations or may maintain a latency lasting for many years. The most important clinical fact which has been confirmed by the exact diagnostic methods of the past few years is that the nervous system is infected early, but that here, as in other parts of the body, it may also remain latent for years, before producing more than occasional or transient symptoms. The control of the treatment of the disease in the first year by the Wassermann reaction and lumbar puncture, if systematically pursued, will probably do much in preventing the development of this latent or

active infection of the nervous system. We must rid ourselves of the old notion that syphilis of the nervous system is caused by a late invasion and realize that the spirochætae gain access to the meninges and the cerebrospinal fluid early in the infection, causing at this time the various manifestations which have been in the past two or three years so carefully studied under the name of neuro-recurrences. A proper grasp of what is taking place at this time, with a knowledge of the means of combating it, will limit the number of hopeless invalids who are now filling our institutions and increasing the burden of our tax-payers. The older treatment by mercury alone or combined with potassium iodide failed to sterilize the infection, except in a minority of cases. This statement needs no proof, as the large number of cases of nerve syphilis are striking witnesses of the fact. Attempts by intensive mercurial treatment to prevent or cure some of the forms of nerve syphilis so signally failed, that we took refuge in the belief that we were dealing, not with the direct results of syphilis, but with degenerative processes that were only indirectly due to it. The discovery by Noguchi and Moore of spirochætae in paresis and tabes has definitely corrected this erroneous conception, so that now we know we are dealing with syphilis and not with para-syphilis. We must therefore endeavor to adapt our treatment of these forms of the disease when established in conformity with the treatment of other infections of the cerebrospinal axis. Following the method of Flexner in cerebrospinal meningitis, Swift and Ellis, by the direct intraspinal treatment, have accomplished results which were not possible by the intravenous use of the drug. In well established cases of tabes and paresis we may hope, under the best conditions, to check the further progress of the disease, cure certain cases, and relieve others of many distressing symptoms. Experience with the intraspinal treatment has been such as to encourage its more extended use in cases which do not yield to intravenous medication alone.

We will do more for the future security of our patients by so directing our treatment in the early months of the infection, as to insure them against the development of these serious forms of nerve syphilis, and this can doubtless be done by intensive treatment, so controlled by the Wassermann reaction and by lumbar puncture, until the cerebrospinal fluid becomes and remains normal. From failure on the part of the patient to co-operate and from skepticism or ignorance on the part of the medical man, the ideal result outlined will require years to accomplish, but that it can

and will be in many cases, is the firm belief of the writer. More uniformity in teaching and more systematic instruction of students in syphilography should be the aim of our medical schools, so that our future physicians shall realize the serious nature of the infection and the means of combating it.

The development of a well-defined plan of treatment has been a process of gradual evolution and is by no means as yet perfect. We have, however, been able to separate the symptoms produced by the drug from those caused by the infection. For example, the so-called nerve recurrences no longer occur in cases systematically treated with salvarsan alone or combined with mercury, so that it can be affirmed in a positive manner that they were the result of imperfect methods of employment and incomplete sterilization.

In order to avoid the toxic effect of salvarsan, it should be given in small initial doses, until the tolerance of the patient is determined and then the dose may be gradually increased. In early syphilis and in syphilis of the nervous system a few doses of mercury intramuscularly should precede the systematic use of salvarsan. The best results are obtained by giving it in series of four to six injections, at intervals of about ten days, combining with it intramuscular injections of mercury salicylate at weekly intervals and following the salvarsan series by eight or ten intramuscular injections of mercury. At the end of this course of treatment, a month's interval should elapse and the series of salvarsan and mercury injections repeated. Two or more such courses of treatment may be required in early syphilis before the Wassermann reaction is influenced. In late syphilis and in hereditary forms of the disease, many such series may fail to change the reaction.

In the late manifestations of syphilis it is important also not to forget the remarkable effects of the iodide of potassium in combination with mercury. We have no more potent remedy in the pharmacopœia than the iodides in resolving gummata, relieving the pains of periostitis and rendering patent the blood vessels occluded by syphilitic infiltration of their walls. In the interest excited by new drugs the benefits of the older ones are not to be forgotten.

Experience has enabled us to state that the disease is only certainly serologically curable in its early stages, and if we do not succeed in permanently changing the reaction at this time, we can not be certain of changing it by the most intensive and prolonged treatment. This statement should not be taken to mean that only early syphilis is curable, but that the result from treat-

ment in old infections is less certain serologically than in earlier ones. Whether a persistent positive Wassermann reaction, after prolonged treatment, means potential syphilis or not, has not yet been answered.

To avoid the toxic action of the drug some of the best syphilographers are advocating small or medium sized doses of 0.3 to 0.4 gm. for men and 0.25 to 0.35 gm. for women. These doses can be repeated at shorter intervals and kept up for a longer time than the maximum doses at first advocated. The results from a continuous action of the drug over a long period are more certain therapeutically and attended with less danger than a few massive doses at longer intervals. It is possible in early syphilis, by the treatment outlined, to sterilize the patient and to obtain a permanent change in the Wassermann reaction in from four to six months. Such results have been confirmed by the writer in patients who have been under observation for from two to three years. Re-infections have been observed in two, and three others who have married have healthy children.

All powerful drugs have their unpleasant consequences and by-effects. Arsenic in the form of salvarsan and neosalvarsan is no exception to this rule. Some patients are unduly sensitive to it and manifest arsenic rashes, gastrointestinal irritation, icterus, peripheral neuritis, hæmorrhagic encephalitis and death. Compared with the whole number of cases treated and the lack of care exercised in the administration of the drug in many instances, the number of fatalities is surprisingly small when we consider that we are dealing with a remedy as powerful as this one. The length of this editorial will not permit any extended criticism of the causes which have led to a fatal issue in some of these cases, but it can be stated that a majority of them have resulted from imperfect technique and from ignoring the contraindications to the use of it. With perfect technique in patients with sufficient kidneys, it is practically free from danger if the dosage is not too large and at too short intervals. The writer's experience has not led him to abandon the older methods of dilution for the concentrated solution. The amount of fluid employed is 180 cc. in the case of old salvarsan. Of the latter, 0.6 gm. is dissolved in 80 cc. of freshly distilled water, alkalized with 15% caustic soda solution and diluted with 0.5% saline to 180 cc. For the neosalvarsan, the dilution is 0.9 gm. in 100 cc. of cool distilled water. The drug is given slowly by the gravity method, so that six to eight minutes are consumed in one administration. No anaphylactic reactions have

been seen in more than 8,000 administrations of the drug. By proper preparation of the patient and by subsequent rest of half an hour it appears to be entirely safe as an office or dispensary procedure, providing patients go home and to bed until the following day. In nerve syphilis and in early florid syphilis the Herxheimer reaction may occur. This reactivation of recent or old foci is seen in secondary eruptions and in tabes it causes a temporary distressing aggravation of the pains and focal symptoms. Reactivation in tabes and paresis usually occurs after the first few injections and the improvement in such cases is correspondingly greater. In focal brain lesions, convulsions or paralysis may be temporary manifestations.

In the degenerative forms of tabes the effect of mercury may be deleterious and in cases in which the interval between doses of salvarsan is too short, we may get the cumulative effect of the arsenic. Because of the failure of mercury alone to influence tabes and paresis and also from their effect in hastening degenerative changes, the combination of mercury with salvarsan in these affections should not be employed as a routine method but only in selected cases. The more active and recent the affection in the brain and cord, the greater the indications for their combined use. In old cases with degenerative effects in the foreground, there is less reason for the use of mercury. Persistent intravenous treatment with salvarsan in tabes and paresis and other forms of cerebrospinal syphilis if without effect on the cells, Wassermann reaction or symptoms, should be followed by intraspinal injections.

In conclusion, it is possible with salvarsan alone, when properly administered in the early stages of the infection to abort it. This has been demonstrated by the persistence of a negative Wassermann reaction over a period of more than two years and by cases of reinfection.

It has a much more rapid effect than mercury on the contagious lesions of the disease, limiting the time during which the patient is a menace to his surroundings. In the later period of the infection, combined with mercury, it has a more marked influence over the clinical manifestations and the Wassermann reaction than mercury alone. In malignant syphilis there is no drug known which has such a marvelous influence on the symptoms. In cases which are resistant to mercury or where mercury has been administered over a long period of years with repeated relapses and persistence of a positive Wassermann reaction, salvarsan is the drug above all others to control the manifestations.

In syphilis of the nervous system which does not yield to the usual methods of treatment, intravenous injections of salvarsan, supplemented by the intraspinal administration, offers more to the patient than any therapeutic measure at our command.

JOHN A. FORDYCE.

THE ANATOMY OF A PATCH OF SEBORRHŒIC KERATOSIS.

By DOUGLASS W. MONTGOMERY, M.D.

ON Feb. 13, 1912, a horticulturist, sixty-seven years of age and enjoying excellent general health, consulted me on account of seborrhœic keratoses scattered over the face and backs of the hands. Some of these patches were merely desquamative; others were reddened and desquamating at a more lively rate; others were covered with a granular, friable mass; others were verrucous; and still others were covered with a tightly adherent corneous mass, as was the patch we are about to describe.

The skin of the centre of the back of the hands was reddened, thin and atrophic. It was smooth excepting where there were patches of seborrhœic keratosis and the lesion that particularly interests us was situated near the centre of the back of the right hand in the midst of this atrophic skin. This lesion was raised, rounded and rough on the surface, and was about two centimetres in diameter. Although it sat on the surface of the skin, it looked and felt as if firmly adherent and subsequent events showed it to be so. In attempting to remove it the tip of a curette was placed at its base and firmly pressed in, the idea being to scrape or gouge it off at one stroke. Instead, however, of the keratosis giving way the skin across the back of the hand ripped off as a flap, exposing the tendon sheaths. This was a most surprising state of affairs—the connective tissue that is usually so tough, ripped apart astonishingly easily, while the keratosis, that frequently is quite friable, was most tightly adherent. The easiest way now to remove the keratosis was to cut off the piece of skin on which it was situated. On this being done the rest of the flap was replaced. Incidentally it may be remarked that the flap healed in place and the hole left by removing the portion where the keratosis was situated granulated

firmly and well, leaving very little scar. The piece of skin with its accompanying keratosis was carefully preserved in alcohol and forms the subject of the present paper.

The best slides, showing the general character of the lesions, are those stained with hæmatoxylin-eosin.

The drawings are schematic and are given to illustrate a most intricate subject into which a great many factors enter. The most salient feature of the sections is the immense horny central mass rising above the level of the rest of the skin. Below this mass there is seen the thickened stratum mucosum with elongated and sharp-pointed papillæ projecting up into it. In the corium below the centre of the keratosis there is a decided round-celled inflammatory infiltration about a number of coils of sweat glands.

For purposes of description the section is divided into four parts. Division two is the most interesting as showing the highest development of the keratotic change. The clear mass lying on the acanthotic rete is pure horn. In looking at the section with the naked eye it is seen to be as translucent as horn. It stains yellow with picric acid and orange with eosin just as horn does. The epithelium of this horny nub is closely lamellated, but this close lamellation and the decidedly horny character of structure ends suddenly on both sides of the central hyperkeratotic clear mass by a sharp perpendicular border. From this border outwards on both sides the horny layers become parakeratotic and loosely lamellated. The central horny mass, at its base, is continuous laterally with the stratum lucidum. In fact, this mass looks like an immensely hypertrophied and somewhat lamellated stratum lucidum. Immediately below this central horny mass the cells of the stratum granulosum are irregular in shape and in size and frequently stain badly. Immediately below this is the thickened acanthotic mucosum. The stratum germinativum seems to be in good condition. There is a considerable amount of inflammatory infiltration in that part of the papillary layer and corium that lies directly under the horny excrescence and the infiltration diminishes rapidly on either side so that there is no inflammatory infiltration at all in the connective tissue layers lying under most of the parakeratosis. What appear to be the coils of the sweat ducts that lie in this situation are in various stages of degeneration. In most instances it can only be guessed from their general glomerular shape that they are the coils of the sweat glands, as many of the cells take the stain in mass and give rise to clumps of deep color.

At the points where the sweat ducts leave the stratum granu-

losum on their way upward to the free surface, the cells of both the stratum granulosum and the adjacent cells of the stratum mucosum take the stain diffusely and deeply. This is viewed as an evidence of oversaturation of these cells with sweat.

Running up through the clear horny central nub are a great number of cork-screw ducts completing the resemblance between this horny excrescence and the thick horny layer of the palm and sole. As indicated in the drawing, this horny nub has a very irregular surface, many of the depressions on the surface being the wells of these sweat ducts that start up through the horny mass with as clear and distinct an outline as if on the palm or sole, but shortly the twisted tubes end in structures having a general well-like shape, but filled with horizontal dissociated epithelial strata.

No cork-screw ducts at all are found in the parakeratotic horny epithelium that lies on either side of the central, clear, horny mass and no ducts could be expected in these dissociated strata. The reason for their existence in the dense horny covering of the palms and soles is to form an exit for the sweat and they serve the same purpose in the present instance. In the loose strata of the parakeratotic layer the sweat would flow out along the layers without impediment and without the necessity of a duct to deliver it. Excepting in the skin directly beneath the central horny nub, nothing resembling coil glands are found.

Far from the lesion at the outer part of division four, all the layers of the skin, as might be expected from its appearance when on the back of the hand, are what might be called normally atrophic. The scurf layer is not particularly scurfy; the horny layer is thin but does not show any peculiarities; the stratum lucidum is not differentiated from the horny layer; the stratum granulosum differs very little from the cells of the stratum mucosum, which are blurred and do not stain well; the stratum germinativum is also not well marked off in palisades, as it would be in a younger person. The papillary layer of the corium is a wavy instead of a papillary line.

The papillary layer and the corium in all situations lack fibrillary structure and stain diffusely and nowhere in them can elasin or elastic tissue be demonstrated. These evidences of senile degeneration together with the ruins of the sweat coils lying in inflammatory infiltration situated below the central horny mass are the striking features of the connective tissue portion of the skin.

A search by staining was made for microörganisms in the above mentioned inflammatory infiltration, but fruitlessly.

From what is known of hyperkeratosis everything points to a

connection between it and the sweat glands in this case. Anything that leads to a saturation of the epithelial cells with watery fluid may give rise to parakeratosis where the epithelial cells retain for longer than they should their tingibility with the ordinary stains and where the cells are not cast off as readily and insensibly as they should be, but on the contrary adhere to form corneous masses and crusts. In hyperidrosis, also, there is a tendency to papillary overgrowth and to the formation of verruca. It is, therefore, quite natural to look upon the œdematous condition of the uppermost cells of the rete mucosum, the parakeratosis, the hyperkeratosis and the papillary hypertrophy as in some way connected with disease of this group of sweat glands. It is impossible under the conditions to say if there was actually hyperidrosis, but the œdematous appearance of the uppermost cells of the rete mucosum and the presence of so many well-marked, cork-screw tubules in the corneous mass would point strongly toward hyperidrosis being present. Furthermore it would not be at all strange if this group of sweat glands, suffering from chronic degenerative inflammation would, analogously to the tubules of the kidneys in Bright's disease, secrete a very watery sweat, more likely to soak the tissues than the normal saline oily sweat and so more readily give rise to œdema of the epithelial cells and to errors of cornification than normal sweat would.

One of the interesting points here is that Hartzell found what was so evident in our specimen, the ruins of the sudoriparous system and connected it, we think justly, with the hyperkeratosis.¹ We do not, however, think that the sebaceous system has nothing to do with seborrhœic keratosis. On the contrary, we think it has more to do with seborrhœa than the sudoriparous system has. Clinically, the sebaceous system is often seen to be especially affected where these seborrhœic keratoses occur. In such cases the fat gland ducts are often seen to be patulous and plugged with fat. Furthermore, with the naked eye, the fat glands are often visible as little yellow balls seen through the translucent atrophic skin of those affected with seborrhœic keratosis. The subcutaneous fat, the fat glands and the hairs all, however, tend to disappear in senile skin and possibly disappear earlier than the sweat glands. When, therefore, the seborrhœic processes and senile atrophy are in an advanced stage the sebaceous glands are not found to be affected because they are not present. It must not be inferred, however, that they were not affected when they were present.

¹ Some Precancerous Affections of the Skin, More particularly Precancerous Keratosis. M. B. HARTZELL, *Jour. Cutan. Dis.*, Sept., 1903.

We have spoken about the action of moisture on the cells of the upper part of the rete mucosum and of the stratum granulosum as causing parakeratosis and papillary hypertrophy, well seen in the tendency people with hyperidrosis evince to the formation of verrucae. Sunlight also causes epithelial cells to adhere to one another abnormally and is recognized as an efficient cause of seborrhœic keratosis. The injurious action of light on the skin depends on two factors:

1. The intensity of the light and especially its richness in chemical rays.
2. The sensitiveness of the skin and especially its inability to form protecting pigment.

Both of these components contributed to this man's injury. He was a horticulturist and, therefore, the backs of his hands were unusually exposed to the action of light. His skin was fair and, therefore, naturally not a good pigment producer and the pigment-forming function would be lessened by advancing age. The man's age and this exposure to light would also account for the loss of elastic tissue and for the consequent brittleness of the connective tissue of his skin. In his history we remarked on this great brittleness and also on the tightness of adhesion of the lesion to the skin. The solidity of these keratoses when situated on the backs of the hands is mentioned by William Dubreuilh² and they form quite a contrast to the friable, crumbly keratoses that occur on the face.

DESCRIPTION OF PLATES.

Fig. 1. Shows a section of the piece of skin under a low power.

In divisions 1, 2 and 3 the rete Malpighii is quite thick, and in division 4 it dwindles down to a fine line. In division 2 lies the thick horny mass constituting the keratosis.

Fig. 2. Shows that portion of the skin about where the division line between divisions 2 and 3 in Fig. 1 runs. There is some small-celled inflammatory infiltration in places in the papillary layer. The papillae themselves are long and steep. The rete Malpighii is thickened and in it there are two sweat ducts in a ruinous condition and with a hyaline appearance of the surrounding epithelial cells. That sweat ducts should be visible at all in this situation is abnormal. Sections of one of the tortuous sweat ducts can be seen in the horny keratotic nub.

Fig. 3. Two sweat ducts in a dilapidated condition ascending through the horny layer. At the point where one of these ducts leaves the rete Malpighii the epithelial cells are indistinct and stain badly, as if saturated with sweat.

² Epitheliomatose d'origine solaire. W. DUBREUILH, *Ann. de Dermat. et de Syph.*, June, 1907.

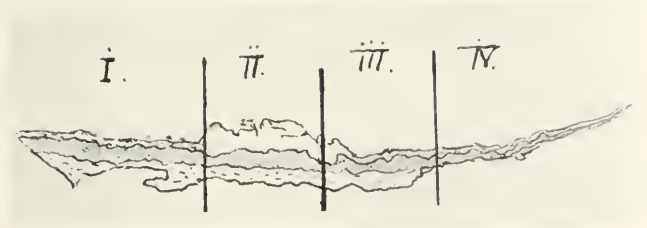


Fig. 1.
Seborrhæic Keratosis.



Fig. 2.
Seborrhæic Keratosis.



Fig. 3.
Seborrhæic Keratosis.

A CLASSIFICATION AND DESCRIPTION OF THE
CUTANEOUS EPITHELIOMATA.*

By J. E. R. McDONAGH, F.R.C.S., London.

THE choice of epithelioma as a subject for discussion is a happy one, because, being an international meeting, we may once and for all be able to banish the difference of meaning which the word epithelioma possesses in this country and on the Continent.

The word epithelioma clearly means a tumor of epithelium, and there is nothing in the word to suggest malignancy. Therefore, the continental meaning of the word is the correct one.

Epithelioma alone should signify merely a growth of epithelial tissue, and a prefix should be added when it is required to state what kind of epithelial tissue is referred to.

Prickle-celled epithelioma would mean an epithelioma beginning in the stratum Malpighii, and as to the nature of the growth, whether it was innocent or not, could be told by putting the word benign or malignant in front.

A rodent ulcer would become basal-celled epithelioma; an epithelioma of the hair follicles, trichoepithelioma; of the sebaceous glands, sebaceous epithelioma; of the sweat glands, syringo-epithelioma.

Intermediary types, which may differ both clinically and histologically from the groundwork types and which link up the latter into a chain, as I described in the August number of the *British Journal of Dermatology*, 1912, might still receive the name which the first describer gave to them.

Beginning with the prickle-celled epithelioma, we have the common benign papilloma, in which the cells still retain their prickles; we then come to a peculiar form of papilloma which is clinically indistinguishable from the simple papilloma, but differs from it in that, even if it is widely removed, it will recur in situ, and that others may appear in different parts of the body. The growths neither spread nor ulcerate, nor do they have metastases. Histologically, more epithelial tissue is seen than in a simple papilloma, and in some cases it is extremely difficult to say whether the epithelial tissue is

* Read before the 17th International Congress, Section on Dermatology, London, Aug. 6-12, 1912.

invading or not. The epithelial cells are not so well formed as those met with in a simple papilloma, and, moreover, prickles are not discernible. The type should receive the name of benign recurring prickle-celled epithelioma. Not infrequently more than one member of the family is affected with this type of growth.

We come next to the pure basal-celled epithelioma, or rodent ulcer, and between the malignant prickle-celled epithelioma, with its typical cell nests of horny material, all grades of epitheliomata exist, which vary according to the layer or layers of epithelium from which the growth originates.

The epithelioma following X-rays is an epithelioma of the uppermost layers of the stratum Malpighii, hence the enormous richness of cell nests. The epithelioma following the sun's rays is an epithelioma of the lowest layers, including the basal cell layer; hence many have the histological features of a rodent ulcer, but differ from it in that cell nests can usually be found. Cell nests, then, in a section which resembles a rodent ulcer, merely means that layers of epithelium above the basal cell layer have been implicated. Therefore, a sharp distinction between malignant-squamous-celled epithelioma and rodent ulcer does not exist; relying upon the absence or presence of cell nests to clear the diagnosis is unjustifiable, as all grades between the two may occur.

We can now pass on to the new growths of the epithelial appendages.

The trichoeipithelioma, the so-called sebaceous adenoma and syringoma, are familiar to you all and are typical epitheliomata of specialized epithelial cells. These tumors all have a point in common, in that they are mostly very benign, do not even tend to increase in size, and do not ulcerate. Malignant trichoeipithelioma does not exist; recurrent syringoeipithelioma is excessively rare, but recurring sebaceous epithelioma, although rare, is occasionally met with.

The groundwork cells of the epithelial appendages are the same, and it is not until they near the stage of maturity that one can say that this group of cells is to form hair follicles and that group sebaceous glands, and the other group sweat glands. Now, new growths of these groundwork cells can occur; a tumor may arise just when the epithelial cells are on the point of setting off cells destined to form the appendages, when the histological appearances will closely resemble a rodent ulcer.

On the other hand, a tumor may arise when the cells which have been set off have become so specialized as to be almost distinguish-

able as lanugo hair follicle cells. Between the two, all grades of tumors may be met with. The most embryonic tumor is the so-called multiple rodent ulcer, and the more mature tumor is the so-called epithelioma adenoides cysticum.

If sections from different cases of these two types of tumor are examined, it will be found that no two are exactly alike; in one the resemblance to rodent ulcer may not be so marked, and in the other it would be stretching the imagination to say that the tumor had anything to do with the lanugo hair follicles.

Clinically, the multiple rodent ulcer differs from the ordinary rodent ulcer in that men are almost invariably affected by the former, and that the lesions begin as well-marked raised nodules, which only begin to ulcerate when they have reached a certain size. Moreover, some of the lesions never ulcerate at all, and in many of those which have ulcerated, the ulceration does not tend to spread; finally some of the lesions spontaneously disappear. The more mature tumor, epithelioma adenoides cysticum, has again a clinical picture of its own. Each individual lesion cannot be distinguished from a trichoepithelioma, a sebaceous epithelioma or a syringoepithelioma, but the difference lies in the multiplicity of the lesions, the peculiar distribution on the face, that women alone are affected, and that the lesions appear in childhood. The strong hereditary element is an important feature of the disease.

Concerning most of the epitheliomata of the skin, there are three very striking points to which I was the first to refer.

1. The mixture of types. By the side of a rodent ulcer, a sebaceous epithelioma is not at all uncommon. Most sebaceous and syringoepitheliomata are accompanied by trichoepitheliomatous elements. A combined sebaceous and syringoepithelioma is not at all uncommon. Clinically, there is no differentiation.

2. The almost constant occurrence of milia.

3. The predilection the tumors have for the oculo-facial and naso-facial grooves.

What is the reason for the frequency of these growths in this neighborhood? Generally speaking, cutaneous new growths, which are usually of epithelial origin, are more common in man than in the rest of the mammalia, and new growths are more likely to occur in situations which once served a purpose. Most mammals have specialized hairs in the orbito-facial fold, corresponding to the supra-orbital eyebrows, and no doubt serving the same purpose; further, important glands occur in both the orbito-facial and naso-facial folds of many animals.

Owing to a more or less uniform distribution of sebaceous and sweat glands, man stands in no need of those facial glands, so characteristic of many antelopes.

The commonest epithelial growth is in connection with the lanugo hair follicles—trichoepithelioma—growths which are usually limited to the face, and which, in my opinion, arise in those lanugo hair follicles which are atavistic of the lower eyebrows. Lanugo hair is embryonic, is atavistic, and a remnant of the complete body covering with hair, which is typical of most of the mammals.

The adult members of the orders Sirenia and Cetacea, though hairless, have their young, in the case of the former, covered with hair, and in the latter with hair limited to the face. The only exceptions are the Beluga, or white whale, and the monodon, or nar-whal. Young elephants have lanugo hair like the human. The lanugo hair follicles soon disappear, but some on the face remain, and they are those which are atavistic of the specialized hairs which ought to have formed the lower eyebrows.

Syringoma is, again, a common new growth.

In man, the sweat glands are uniformly distributed over the body, but in many animals they are localized—for instance, on the soles of the feet in some of the rodentia—or they may be completely absent, as in the Sirenia and Cetacea.

In animals, most of the sweat glands open into the hair follicles, but some have their own point of exit in the epidermis, the latter being the case in adult life only. As in man, the sebaceous glands in animals are usually associated with the hair follicles. So closely are the sebaceous glands connected with the hair follicles that when the hair of the Cetaceæ disappears, the sebaceous glands vanish also.

Like the sweat glands, the sebaceous glands are in some animals localized, for instance, on the snout and anus in the manis or scaly ant-eater, or they may be absent altogether, although the animal be well covered with hair, viz., *Cholæpus* and *Chrysochloris*.

The specialized skin glands, of which man possesses none, so characteristic in other mammals, are made up of either sweat or sebaceous glands, or a mixture of the two. They are situated in different parts of the body in the various orders, the face glands being typical of the artiodactyla and so on.

Of the face glands there are two kinds:

- (a) Supra-orbital, as in *Oryx beisa*;
- (b) Sub-orbital or ante-orbital.

The second group is typical of certain deer, and in most cases designated by a fold of skin or pocket, the edges of which are some-

times inverted; these are the so-called tear grooves—folliculi lacrymales.

In my opinion, the small tumors so frequent below the lower eyelid, which may be made up of lanugo hair follicles and often of sebaceous and sweat gland tissue, are reversions to the face glands of deer.

The tumors are often mixed, which is another point in favor, since the ante-orbital gland of the gnu is made up of both sebaceous and sweat glands, which may open separately in the epidermis or directly into the hair follicles.

If the sebaceous gland type of tumor be carefully examined, it is often found with remains of a lanugo hair follicle in the centre.

Leaving the description of the various epitheliomata, we become confronted with three pertinent questions.

1. Why are some epitheliomata benign and others malignant?
2. What is the cause of the malignancy?
3. Why are metastases or glandular involvements rare in epitheliomata of the skin?

Whether a tumor is benign or malignant depends, in my mind, partly upon the stage in the development of the cells from which the tumor arises and partly upon the resistance of the cells involved against the exciting cause. In very early embryonic life, the epidermis consists of one layer of epithelium, the cells of which resemble the later basal-celled layer or stratum spinosum.

Therefore a tumor arising therefrom will have a great capacity for activity, or, in other words, malignancy, while a tumor arising from mature and highly specialized sebaceous gland cells—cells which have reached their zenith or performed their function—have little or no capacity for activity and therefore are benign.

Tumors arising from cells in their intermediate stages are neither so active and therefore malignant as the former group, or so mature and benign as the latter group, so they are able to recur only after removal.

However active or embryonic cells may be, a tumor arising therefrom, by whatever its dimensions, will still consist of morphologically the same cells, or, in other words, the cells constituting the growth do not become more mature or specialized.

The thorny question concerning the cause of malignancy I will pass by as that is to be considered in another paper, in order to answer the third question.

Metastases are usually by way of the lymphatics; and, whether a certain tumor gives rise to metastases will depend upon the proximity thereof to the lymphatics, the number of lymphatics, and the looseness and size of the cells constituting the tumor. Metastases then take place mechanically. Nearly all epithelial growths of the skin are limited to the corium, and the lymphatic vessels are richest in the tissue beneath the corium; therefore, there is not much chance for metastases to occur. Furthermore, the cells are not loose, as in sarcomata, but firmly bound together.

An enlargement of the neighboring lymphatic glands is no certain criterion that they already contain cancer cells; the enlargement may simply be a defensive action at the base, an extra overgrowth of lymphocytes to combat the mischief. There is no relationship between the size of the gland and the amount of cancer cells it contains. An enormous gland may contain practically no cancer cells and vice versa—an analogy which is also to be met with in syphilis.

Finally, I append my classification of the cutaneous epitheliomata. The cutaneous epitheliomata should be divided into three main groups:

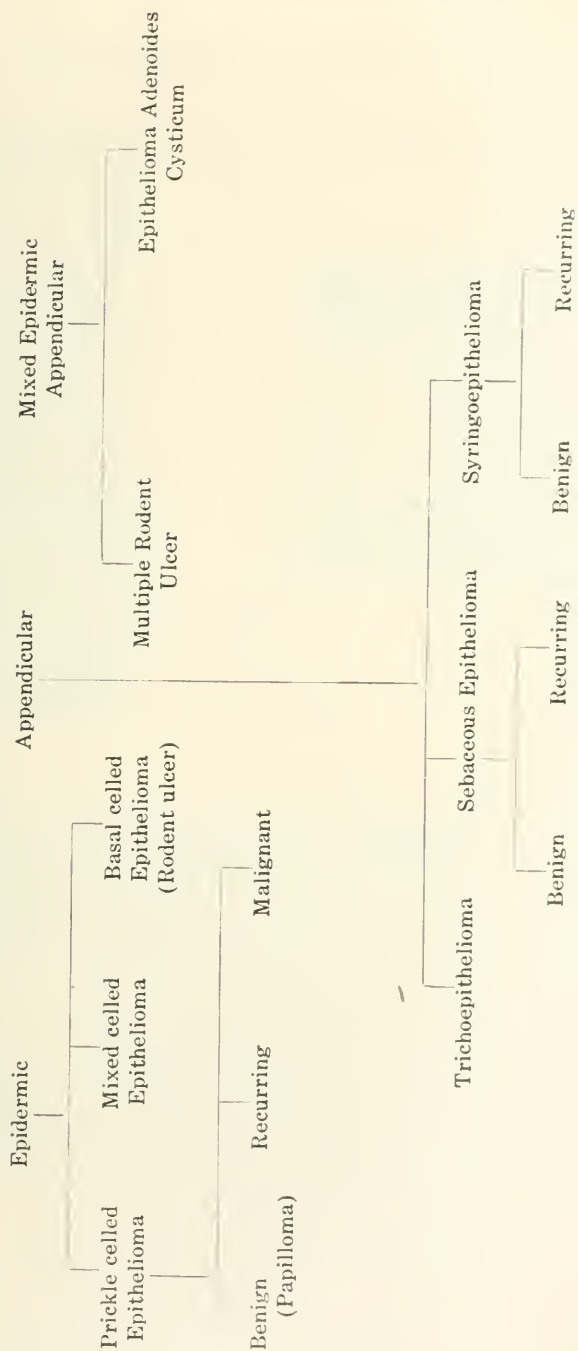
1. Epidermic;
2. Appendicular;
3. Mixed epidermic appendicular.

The epidermic should be divided up into prickle-celled epithelioma, mixed-cell epithelioma, and basal-celled epithelioma. The prickle-celled epitheliomata should be further subdivided into benign prickle-celled epithelioma or papilloma, recurring prickle-celled epithelioma and malignant prickle-celled epithelioma.

The appendicular should be divided into trichoepithelioma, sebaceous epithelioma and syringoepithelioma; the two last having a subdivision of recurring sebaceous epithelioma and syringoepithelioma.

The mixed epidermic appendicular should be subdivided into multiple rodent ulcer and epithelioma adenoides cysticum.

EPITHELIOMATA.



CLINICAL REPORTS.

A CASE OF "RINGWORM YAWS" IN A BARBADIAN NEGRO.

By H. C. CLARK, M.D., Ancon, Canal Zone.

THE results of Dr. Fox's¹ detailed study of the dermatological peculiarities of the negro are full of interest to those of us on the Isthmus of Panama who come in contact with so many West Indian negroes. The descriptions of the annular lesion of early syphilis and the diseases from which it must be differentiated mean much to one, because in Panama one's experience is largely among the negroes, and tropical skin diseases are to be added to the list for differentiation. From a laboratory standpoint, the usual cutaneous diseases we are asked to identify have been syphilis, frambæsia, leprosy, lupus, mycosis fungoides and Leishmaniosis. Most confusion exists in differentiating syphilis and frambæsia when the latter is not seen in the full bloom of its secondary eruption. The Wassermann reaction will not suffice. Dr. L. B. Bates has performed the test on nine cases of frambæsia at Ancon Hospital, finding it positive in five cases, a partial reaction in one, and in four instances negative.

Bloombergh² tried the test on two cases in the Philippines with positive results. Furthermore, the two diseases may simultaneously occur in the same patient.^{5, 6} Thus one is left clinical history, observation, and the demonstration of "treponema pertenue" upon which to establish a diagnosis, and these are quite sufficient in most cases. The cutaneous manifestations of the secondary lesions in frambæsia tropica (as seen in the nine cases mentioned) may more closely simulate at times those described by Fox as the annular-papular syphilide, than any of the true syphilides seen in the laboratory at Ancon. Small, coin-shaped syphilides are occasionally seen, but no case has appeared thus far which so graphically illustrates the lesion as the cases⁴ he has recorded.

Figure 4, used in illustrating one of Dr. Fox's articles,³ is occasionally seen in both frambæsia and syphilis, perhaps more frequently in the former, for in this disease several types and stages of lesions are present at the same time.

All cases of frambæsia recorded in the last four years at Ancon



Fig. 2.
Ringworm Yaws.
Lesions on back of neck.



Fig. 3.
Ringworm Yaws.
Lesions on back of neck.



Fig. 1.
Ringworm Yaws.
Lesions on right shoulder and upper arm.

Hospital have occurred in West Indian negroes or Spanish-Indian types, with the one exception of an American negro.

These cases will not, as a rule, appear for treatment until well advanced in the secondary stage, when the face and hands become unsightly and the patients are annoyed by the oozing from the large nodules. The common lesion of this stage is a raspberry-like nodule surmounted by a large, soft, yellow, waxy crust, from beneath which oozes an almost clear sero-purulent fluid. New or early lesions are usually pin-head papules, either discrete or in groups about to coalesce. Old lesions, or the site of old lesions, are many times represented by circinate forms. It may be only a deeply pigmented ring with a lighter centre which has cleared, or an elevated, indurated periphery may be present with the centre normal, except for fine desquamation. These lesions usually occur on the face, back, chest or thighs.

CASE REPORT.

Hospital No. 141929. Name, C. R. A male Barbadian negro of 23 years. He had lived in the Canal Zone three and a half years, being always employed as a waiter in the various clubs of Panama City.

No history of a primary lesion could be gained, unless credence is given a “pimple” on the point of the chin, which he claimed was present “long before the others.” For three or four weeks an eruption had been present on the chin, right frontal region of the scalp at the hair line, all about the neck and shoulders and on the legs from the mid-thigh region downward and principally on the anterior and external surfaces of the legs. He claims there had been “sores” on both back and chest, that had disappeared. The lesions on the shoulders were of the usual type encountered in frambæsia, being surmounted by a yellow, waxy crust and oozing honey-like serum from the surface in large amounts, when the crusts were removed. (See figure representing right shoulder). The eruption over the legs was dry, hard, flat and pigmented and apparently almost healed. Over the back and the anterior surface of the chest were large pigmented circles with light centres, marking the probable site of old lesions. In the axillary region were several scattered and a few confluent pin-head papules. When fully dressed, the only visible lesions were those of the neck and face and these were the ones which, up to the time of laboratory investigation, had been diagnosed and treated as *tinea circinata*. The failure to respond to treatment along this line resulted in the patient being admitted to Ancon Hospital for routine observation. The neck lesions were also retrogressive, there being no waxy crusts present. Instead of nodules they appeared in crescentic and circinate forms, both large and small, which closely simulated ringworm lesions. The border was elevated and indurated and pigmentation was increased, while the summit was grooved by chronic ulceration and filled with a dry, yellowish white exudate, suggesting a mycotic growth. (See figure representing lesion on back of the neck). One or two coin-shaped old lesions were found at the hair line in the right frontal region and on one side of the chin. These were rather faint, but formed complete circles about 2 cm. in diameter. The tissue in the centre had entirely healed.

Smears made from serum obtained by irritating the surfaces of the lesions on the shoulders and back of the neck revealed the pres-

ence, in large numbers, of *treponema pertenuis*. The Wassermann test was positive. Salvarsan speedily cures these cases and shortens their stay in the hospital to about seven days.

An illustration of a child with "Ringworm Yaws" and a full description of the circinate lesions is given by Scheube.⁵

Castellani and Chalmers⁶ also offer an illustration which represents circinate secondary lesions of yaws, about as they have been seen in Panama, but do not describe it as a confusing factor in differential diagnosis.

The present case has been presented because it offers an example of secondary circinate lesions in frambæsia, which may frequently lead to confusion in diagnosis.

In the negro of the tropics, annular or circinate papular lesions associated with a positive Wassermann test can not always be taken as a positive indication of syphilis, because these conditions are not infrequently associated in cases of frambæsia.

Thanks are due Dr. S. T. Darling for the illustrations and helpful suggestions.

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ARTHROPATHY IN SECONDARY SYPHILIS.

By UDO J. WILE, M.D., ANN ARBOR.

Professor of Dermatology and Syphilology, University of Michigan, Department of Medicine and Surgery.

JOHN HUNTER, Ricord, von Zeissel and others denied that syphilis could cause joint disease. On the other hand, Virchow, Schüller, Richet, Fournier and Hutchinson have shown that syphilis of the joints is by no means an infrequent occurrence. According to Sir Jonathar Hutchinson, joint disease coincident with the eruptive stage of syphilis

is recorded as early as 808 in a Japanese medical work. Joint pains are also mentioned as common by Fracastor, and it seems probable, from this early writing, that the epidemics of syphilis in France and Italy were attended by pains in the bones and articulations.

The question of syphilitic arthropathy receives scant attention in the texts on orthopædic surgery, likewise in most texts dealing directly with syphilis, save in the work of Fournier. An excellent monograph on this interesting subject is to be found in the "*Traité de la syphilis*" of Fournier,¹ also one by Morestin,² by Jonathan Hutchinson,³ Lancereaux, Schüller, Richet and Voisin.

According to Fournier, Morestin and Hutchinson, syphilis of the articulations in the secondary stage may be manifested in three different forms:

First and most frequent, simple arthralgia. While not so common a cause of osteocopic pain as pain in the bone itself, arthralgia nevertheless is frequently met with early in the disease. Arthralgia is purely a subjective symptom, occupying, as a rule, one joint,—knee, ankle or shoulder. On examination, absolutely nothing objective may be made out; no limitation of movement, no crepitus or fluid. Very occasionally on deep pressure, a slight amount of pain may be elicited. Characteristic of such joint pain is its frequent exacerbation during repose, and its amelioration following exercise of the joint.

Hydrarthrosis is less common than arthralgia, although it may accompany or follow the latter. As a rule, it is painless, monoarticular, causing limited functional difficulty only by reason of the fluid present. The knee is the most frequent site of the effusion, the ankle and elbow next; but any joint may be affected. The amount of fluid present in the joint is, as a rule, less than in other forms of serous arthropathy, and accordingly, the deformity of the joint is not great. There is usually simply a uniform fulness of the affected joint; in a fleshy individual this could easily be overlooked, and even in thin subjects the condition escapes casual observation. Trauma does not seem to be a factor in the production of the condition as in tertiary joint involvement. Appearing rather suddenly, and apparently spontaneously, hydrarthrosis may disappear in as rapid a manner. Under general antisiphilitic treatment there is prompt subsidence of the process, and no tendency to recurrence.

Under the vague caption "pseudo-rheumatic arthropathy," Fournier describes a third form of joint disease associated with secondary syphilis. It is the rarest form of arthropathy, affecting at most two or three joints—usually, however, but one, the knee being the special joint of predilection. Accompanying this form there may be a low fever, but no sweats. The affected joint rapidly becomes painful, both to palpation and spontaneously. According to its intensity, this pain limits motion in the joint. Swelling is slight, deformity also slight. The tendency for this form of arthritis is to persist (unless active treatment is instituted) for weeks and even months. If neglected, crepitus and crackling, undoubtedly due to

chronic changes within and involving the joint structures, may be left as a residue of this condition. As in the other two forms, however, under appropriate treatment the joint is readily restored to normal.

I should like to call particular attention to that phase of secondary syphilitic arthropathy in which effusion occurs in the joints. I am quite confident that hydrarthrosis occurs far more frequently than is generally recognized. The lack of subjective, and the insignificant objective, findings, together with its transitory nature, make it a condition which escapes casual examination.

During the past year I have had the opportunity of studying two cases of secondary syphilis in both of which hydropic joints occurred, and in both of which, singularly, the joint manifestations were the predominant rather than the secondary features.

CASE REPORTS.

CASE 1. Mrs. W., aged 56, was seen early in January, 1913, for a supposedly streptococcus sore throat, at that time epidemic in her city. Some few weeks previously her husband is said also to have had a streptococcus throat. A few weeks after the cessation of the throat manifestation the patient developed a nocturnal (usually about 8 P.M.) chill and fever, followed by a slight sweat. She felt quite badly at this time, becoming rather anæmic and weak. The presence of a coincident tender enlarged spleen led to the thought of a possible malarial infection, but the most careful search failed to reveal any parasites in the blood. About eight weeks after the onset, a hydrarthrosis of both ankles occurred. The effusion remained but a few days, and was followed by arthralgia, which remained from this time (February, 1913) until I saw her, as the most prominent feature of the case. The joint symptoms, together with the anæmia, fever and weakness and sweats quite naturally led the attending physician to regard the case as an arthritis, possibly secondary to the streptococcic throat. The diagnosis was made perfectly plain by the appearance early in April—three months after the onset—of a large papular syphilide which covered the entire body. Under combined salvarsan and mercury therapy, there was a prompt subsidence of all symptoms. At the time that I saw the patient, immediately after the eruption had appeared, the ankle joints were still slightly but uniformly swollen; there was slight pain on deep pressure; the joints were cold; and there was slight restriction of flexion and extension, undoubtedly due to the presence of a small amount of fluid within the joint.

CASE 2. Dr. X. consulted me, November 7, 1913, for a sore on the finger, a rash on the body, and a lame knee which the patient said developed from tramping in the woods. Status præsens showed the following: Extragenital chancre, mucous patches of the mouth, condylomata lata ad anum and general adenopathy. The left knee is distinctly but uniformly

swollen, the most marked bulging being posterior. It is painless to deep pressure, not red, but slightly warmer than the neighboring skin surface. There is no crepitus, and slight limitation of extreme flexion is present, due to the presence of fluid in the joint. Notwithstanding the widespread exanthem and the sore finger, the patient, who was unaware that he had contracted syphilis, complained most of his knee, which bothered him in walking.

In both cases, under antisypilitic treatment, rapid subsidence of all symptoms took place.

It would appear from these two cases, that not only is hydrarthrosis a transitory, insignificant, and easily overlooked condition, but in certain cases it may, on the other hand, be so prominent a feature as to lead to grave errors in diagnosis. It is readily conceivable that in the absence of other signs of syphilis, such cases might be treated for acute rheumatism, and the syphilis itself escape attention and treatment.

I believe that careful routine examination of the joints in secondary syphilis will serve to demonstrate hydrarthrosis as a not infrequent secondary manifestation of the disease.

HISTOPATHOLOGY.

HISTOLOGICAL STUDIES IN SOME TYPES OF SKIN TUBERCULOSIS.

By JOHN A. FORDYCE, M.D., New York.

Professor of Dermatology and Syphilology, College of Physicians and Surgeons, Columbia University.

THE skin possesses a relatively high resistance against tuberculous infection and does not offer as favorable a soil as some of the other organs. This may be attributed in part to the protection which the horny layer affords against inoculation, the resistance of the underlying epithelial cells, the dense fibrous structure of the cutis, and possibly individual immunity. Cutaneous infection may take place in the following manner:

1. By inoculation, exogenous or endogenous.
2. By contiguity, as from underlying bones, joints, lymph nodes, etc.

3. By metastasis through the blood and lymph stream.

As the mode of inoculation, local anatomical differences and

predisposition determine the variety of infection, a marked clinical and histological polymorphism results. In spite of this, certain features are constant enough to justify the grouping of the cutaneous manifestations, as follows: lupus vulgaris, tuberculosis verrucosa cutis, scrofuloderma, miliary tuberculosis and tuberculous ulcers.

In the skin, as elsewhere, the tubercle forms the characteristic of the infection, acting as the connective link between the different types of cutaneous tuberculosis. For anatomical reasons, however, we find modifications, such as tubercles composed almost entirely of lymphocytes, while others show a preponderance of epithelioid cells and giant cells as well as an absence of, or only a slight amount of caseation. This is partly explained by the relatively small number of tubercle bacilli usually present in the skin, with consequently not sufficient toxins to produce destruction of tissue, and possibly by the better vascularization of the cutaneous tubercle, owing to the resistance of the skin and lesser degree of endarteritis.

In tubercle formation, the primary reaction is believed to be on the part of the endothelium of the lymph spaces, capillaries or blood vessels. The cells swell, proliferate and fuse, forming a giant cell with the bacilli in the centre. Lymphocytes and plasma cells collect and the vessels in the immediate neighborhood become similarly involved. The toxins produce destruction of the tissue and necrosis, which may remain limited to the giant cell. As the bacilli multiply, they are carried to other lymph spaces, where new tubercles develop, and thus we may have an agglomeration of tubercles or a diffuse process. When the amount of toxin is small and the rate of development slow, the tissue adapts itself and responds by proliferation of the fibroblasts and the production of connective tissue, varying from fibrosis to distinct capsule formation.

The primary lesion of lupus vulgaris is a yellowish-red or reddish-brown nodule, situated in the cutis. It is soft in consistence, becomes pale but does not disappear on pressure, and is known as the "apple-jelly" nodule. These lesions vary in size from a pin-head to a millet seed and, by coalescence, give rise to reddish, elevated patches, which during their period of development produce various clinical forms, as lupus tumidus, lupus verrucosus, lupus sclerosus, lupus serpiginosus, lupus exulcerans, etc. Central involution may occur and the diseased area may be replaced by scar tissue, but there is a marked tendency on the part of the lupus nodule to recur in cicatricial tissue.

LUPUS VULGARIS occurs most frequently on the face, especially

on the nose, and leads to characteristic deformity from destruction of the cartilaginous tissue—the peaked or pointed nose—in contradistinction to syphilis, where the bony portion is attacked and leads to a flattened or depressed nose. Statistically, about 70 per cent. of all cases of lupus show mucous membrane involvement, and perforation of the septum is not uncommon. In about 30 per cent. pulmonary tuberculosis is present.

In its histological appearance, lupus vulgaris is as manifold as its clinical manifestations. The lesion in general consists of an agglomeration of closely set, relatively well-developed tubercles of epithelioid-giant cell and lymphocyte type, with little or no necrosis. With the tubercles a purely inflammatory infiltration may co-exist (Fig. 1). If proliferation of the bacilli continues, the cells are destroyed until typical areas of caseation are produced, with surrounding giant cells, as illustrated in Fig. 2. When the process develops in the superficial layers of the derma, diffuse infiltration is more apt to occur, as shown in Fig. 3, which also pictures extension along the hair-follicles, into the deeper parts of the cutis. This explains why the remedies as ordinarily applied are so soon followed by relapses. Curettage, the application of caustics or even the galvano-cautery destroys only the more superficial part of the lesion.

A very early stage of cutaneous tuberculous infection is depicted in Fig. 4. This eruption, when first seen, was confined to the lower extremities and clinically resembled the lesions of lichen planus or those described under the name of lichen nitidus, by Pinkus. The patient, a man past 30, was observed for a period of two years, so that the evolution of typical lupus nodules from the small lichen-like papules could be followed. Some months later, the eruption appeared on other portions of the body. He further developed verrucose tuberculosis of the foot and succumbed to generalized tuberculosis at the end of two years. The histological picture is also suggestive of lichen planus in the distribution of the infiltration. There is, however, a greater degree of endarteritis and a deeper involvement of the cutis. As the disease progressed, its tuberculous nature became more apparent, until at the height of its development, lesions were met with as shown in Fig. 5: namely, a perifollicular tuberculosis with tubercles presenting variations of the Langhans type of giant cells occupying the centre, the periphery, or more or less irregularly scattered.

The fate of the collagenous and elastic tissues in the neighborhood of tubercle formation is varied. Where the process is diffuse,

the connective tissue is entirely destroyed, rarefied, or covered by cell infiltration, or, as in the hyperplastic type, a fibrosis exists, encapsulating the tubercles, as shown in Fig. 6.

The appendages are passive. The process may localize about the follicles by virtue of their blood supply or extend through the cutis by means of this route. The follicle may undergo atypical proliferation or, as a result of hyperkeratosis or secondary pus infection, becomes distended and cyst-like. The sebaceous glands are destroyed early. The tubercles may also localize about the coil glands, and the latter may undergo dilatation and degeneration of their epithelium.

The vessels show all grades of changes, from dilatation and swelling of their endothelium, to complete occlusion.

The epidermic changes are secondary to those in the cutis and may present atrophy, hypertrophy, or irregular proliferation, with œdema and degeneration of the cells.

As the granuloma is absorbed spontaneously or as the result of treatment, there is replacement by scar tissue. This is vulnerable to reinfection, as shown in Fig. 7, where there is a recurrence in a cicatrix.

TUBERCULOSIS VERRUCOSA CUTIS occurs most frequently on the hands, arms or legs and is characterized by one or several plaques of variable size and form, covered with warty excrescences and sometimes miliary abscesses and crusts. There is little tendency to ulceration and there may be spontaneous involution with cicatrization. It is the typical form of inoculation tuberculosis. The epidermis reacts in a relatively characteristic manner (Fig. 8). The surface of the rete is irregularly hollowed out by an enormously hypertrophied horny layer, in places parakeratotic and in others hyperkeratotic, and presents here and there whorls. Collections of polynuclear leucocytes are also frequent. The stratum granulosum in some areas is missing, in others it is thinned or increased. The rete is thinner than normal over the hypertrophied papillæ and between them produces an irregular downgrowth. The entire cutis may be involved, but it has been my experience to find the process limited to the superficial layers as a diffuse infiltration with no distinct tubercles and few giant cells. A non-tuberculous infiltration, rich in polynuclear leucocytes, disguises in a measure the typical infiltration. Sclerosis of the underlying connective tissue is often a feature.

SCROFULODERMA is the term restricted to that form of tuberculosis which begins primarily in the subcutaneous tissue or involves

PLATE III.—To Illustrate Article on Histological Studies in Some Types of Cutaneous Tuberculosis, by JOHN A. FORDYCE, M.D.

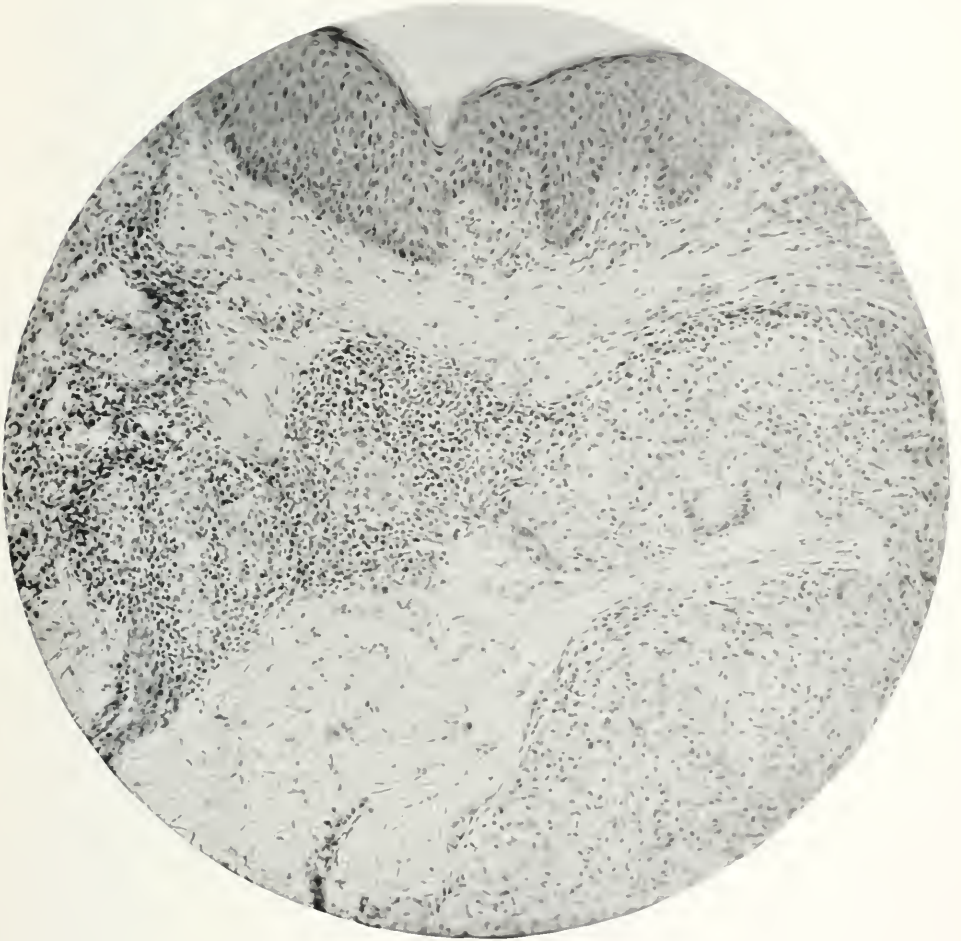


Fig. 1.

Lupus Vulgaris.

Zeiss 8 mm., Co. Ocular 4.

A lesion of the shoulder showing confluence of tubercles.

PLATE IV.—To Illustrate Article on Histological Studies in Some Types of Cutaneous Tuberculosis, by JOHN A. FORDYCE, M.D.

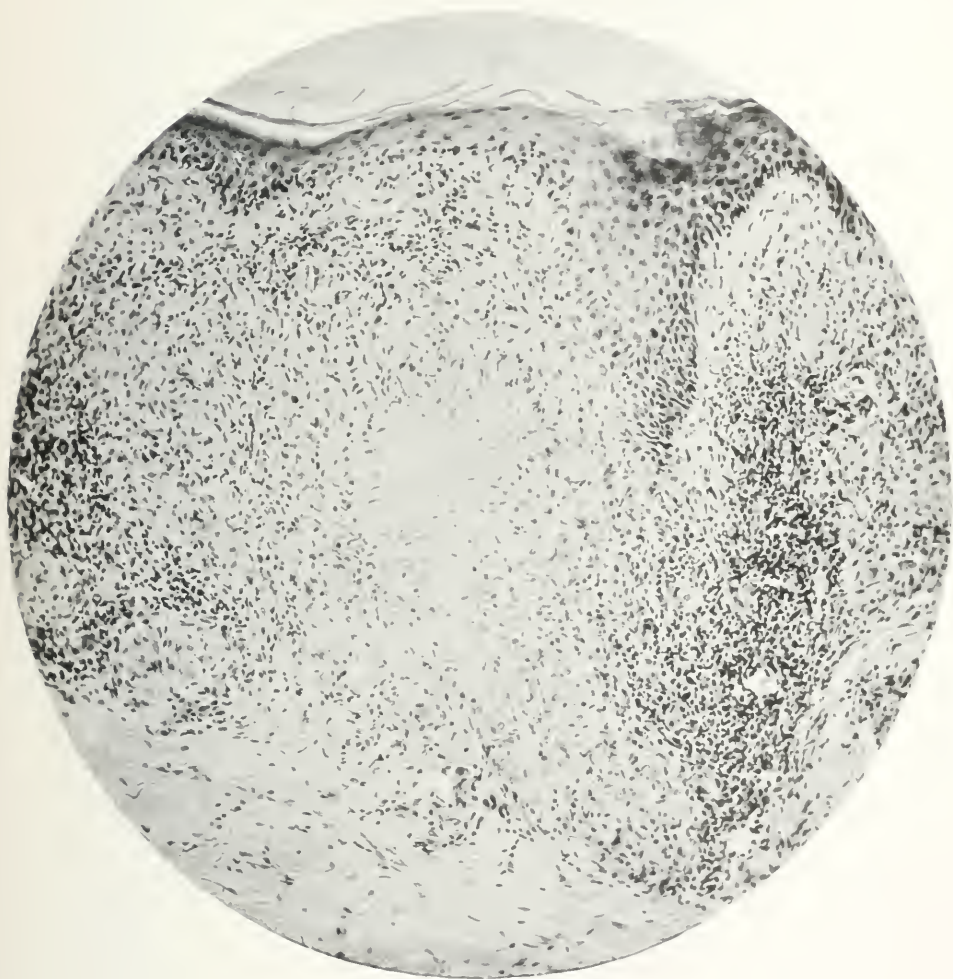


Fig. 2.

Lupus Vulgaris.

Zeiss 8 mm., Co. Ocular 4.

This photograph illustrates beginning caseous degeneration in the central portion of the infiltration.

PLATE V.—To Illustrate Article on Histological Studies in Some Types of Cutaneous Tuberculosis, by JOHN A. FORDYCE, M.D.

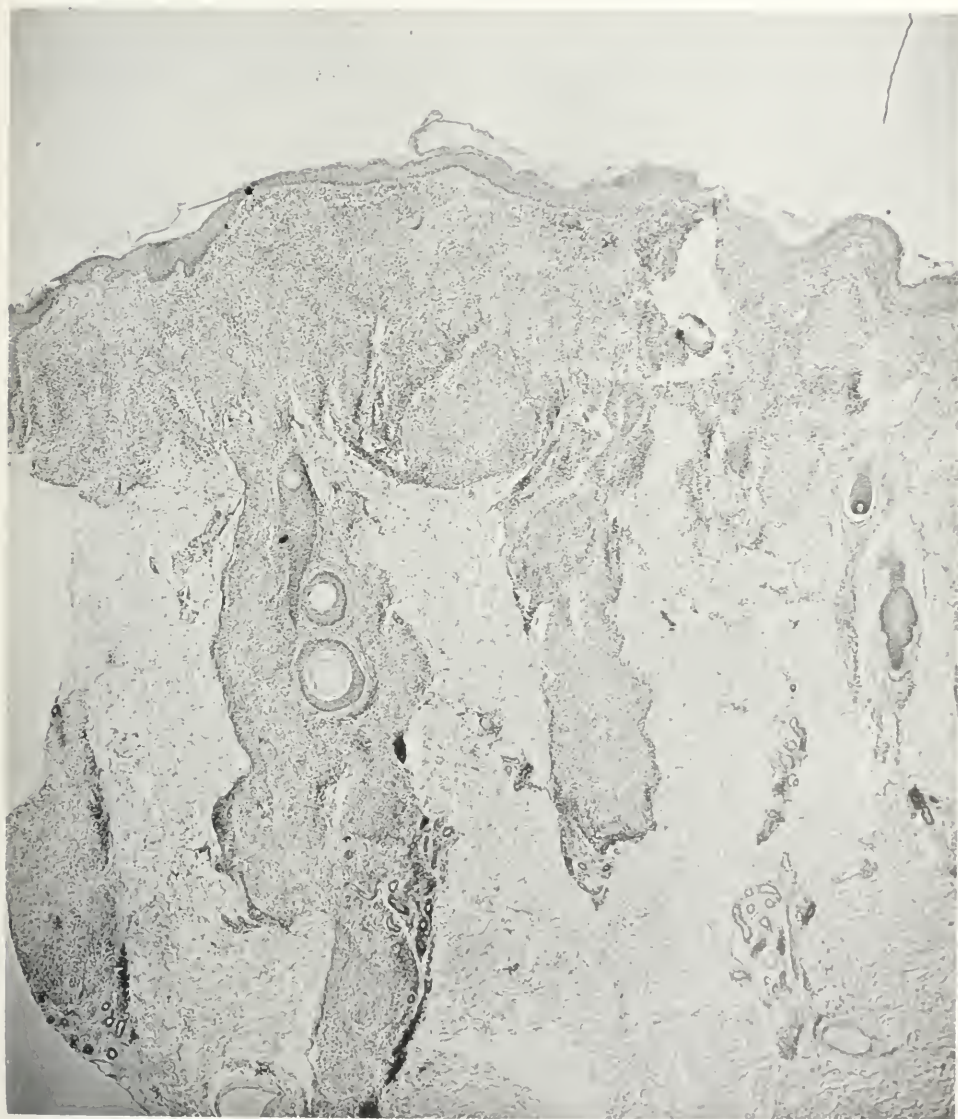


Fig. 3.

Lupus Vulgaris.

Zeiss Planar 20.

A typical picture of this form of tuberculosis. Note diffuse infiltration of granuloma in upper corium beneath atrophic epidermis and extension downward along the hair follicles and about the coil glands.

PLATE VI.—To Illustrate Article on Histological Studies in Some Types of Cutaneous Tuberculosis, by JOHN A. FORBYCE, M.D.

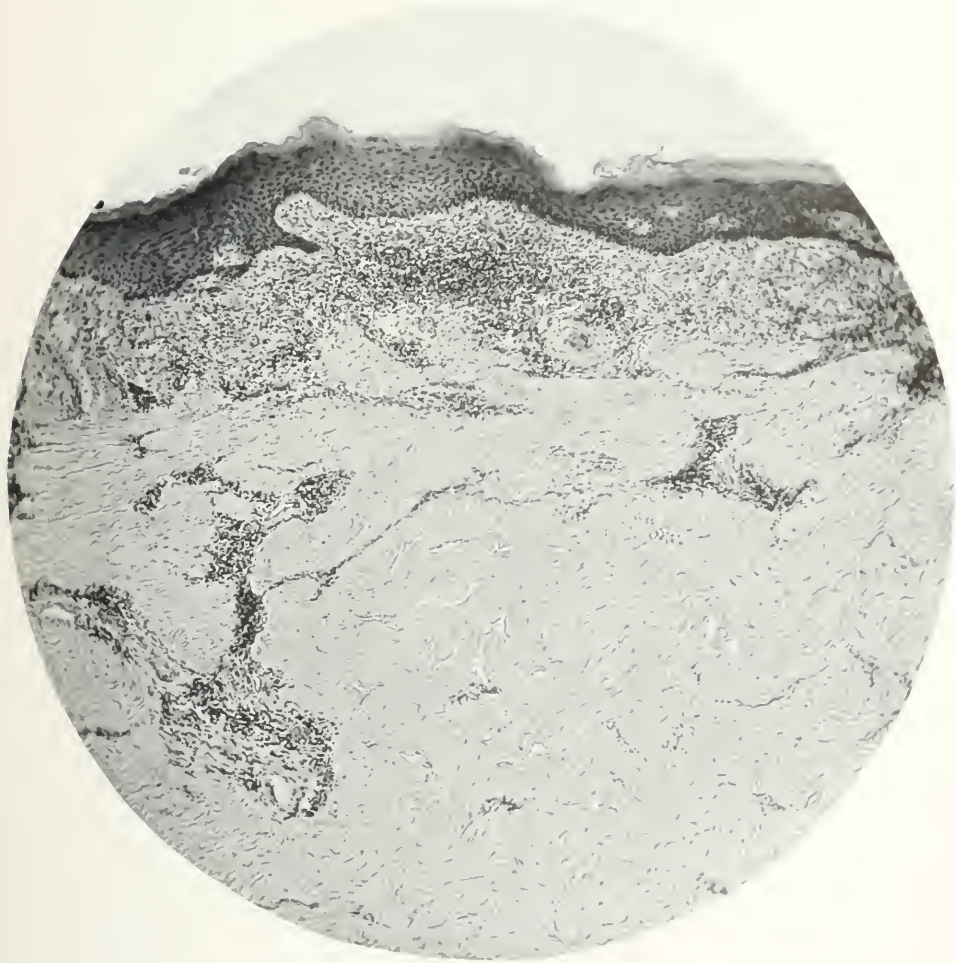


Fig. 4.

Early Tuberculous Inflammation.

Zeiss 16 mm., Co. Ocular 4.

Showing the superficial infiltration and flattened epidermis of a small lichen-like papule of the leg which was the first stage in the development of a disseminated lupus. Lymphocytes and plasma cells make up the infiltration. In later lesions giant cells were also found. A marked endarteritis is present.

PLATE VII.—To Illustrate Article on Histological Studies in Some Types of Cutaneous Tuberculosis, by JOHN A. FORDYCE, M.D.

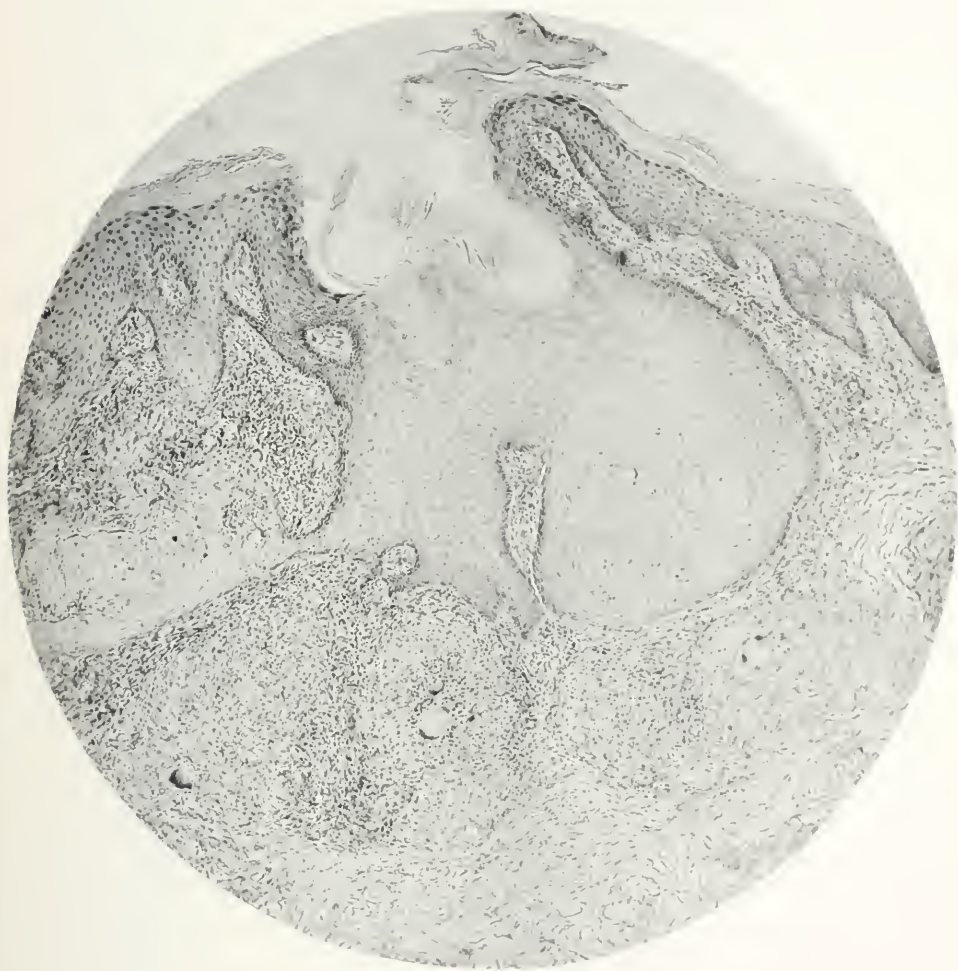


Fig. 5.

Follicular Lupus Vulgaris.

Zeiss 16 mm., Co. Ocular 4.

A later lesion from the case of disseminated lupus showing the follicular hypertrophy with keratosis and atypical proliferation. The tubercles, composed of lymphocytes, plasma and giant cells, are confined to the region about the follicle. The majority of the vessels in this area are obliterated by an endarteritis.

PLATE VIII.—To Illustrate Article on Histological Studies in Some Types of Cutaneous Tuberculosis, by JOHN A. FORBYSER, M.D.

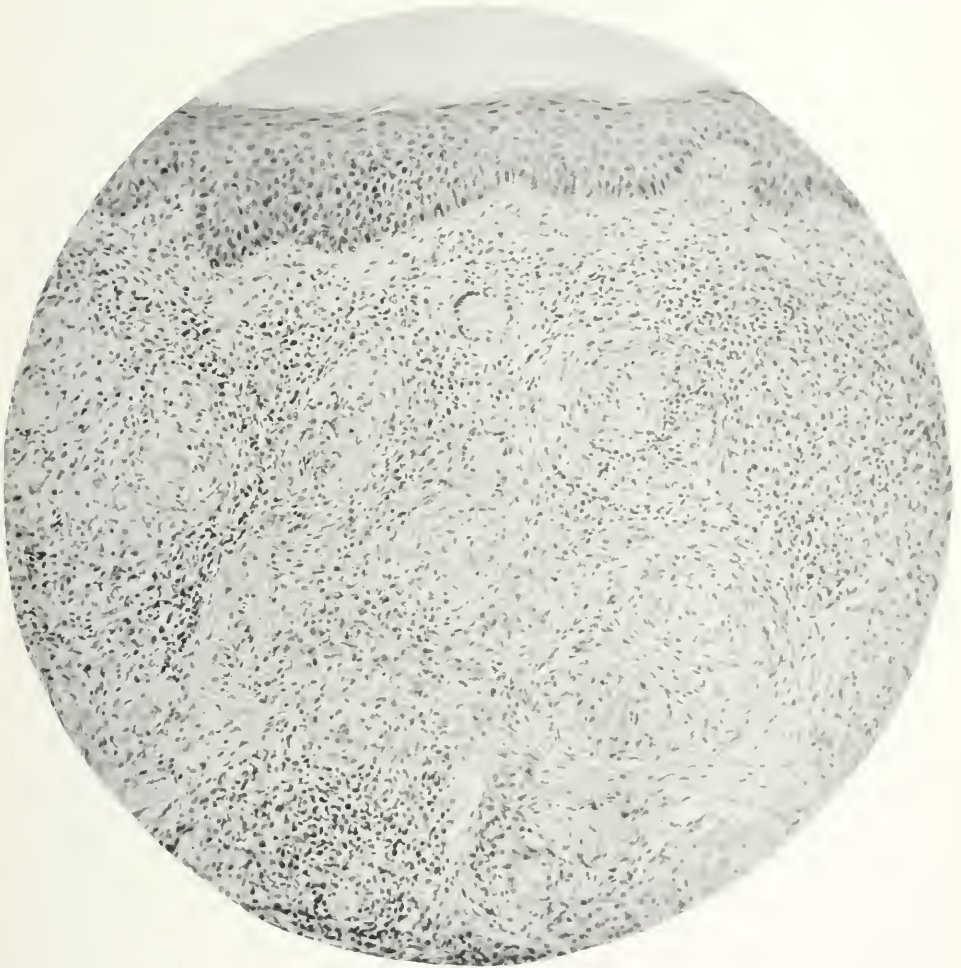


Fig. 6.

Lupus Vulgaris.

Zeiss 8 mm., Co. Ocular 4.

Illustrating the hyperplastic type, with fibrosis about the tubercles.

PLATE IX.—To Illustrate Article on Histological Studies in Some Types of Cutaneous Tuberculosis, by JOHN A. FORBYES, M.D.

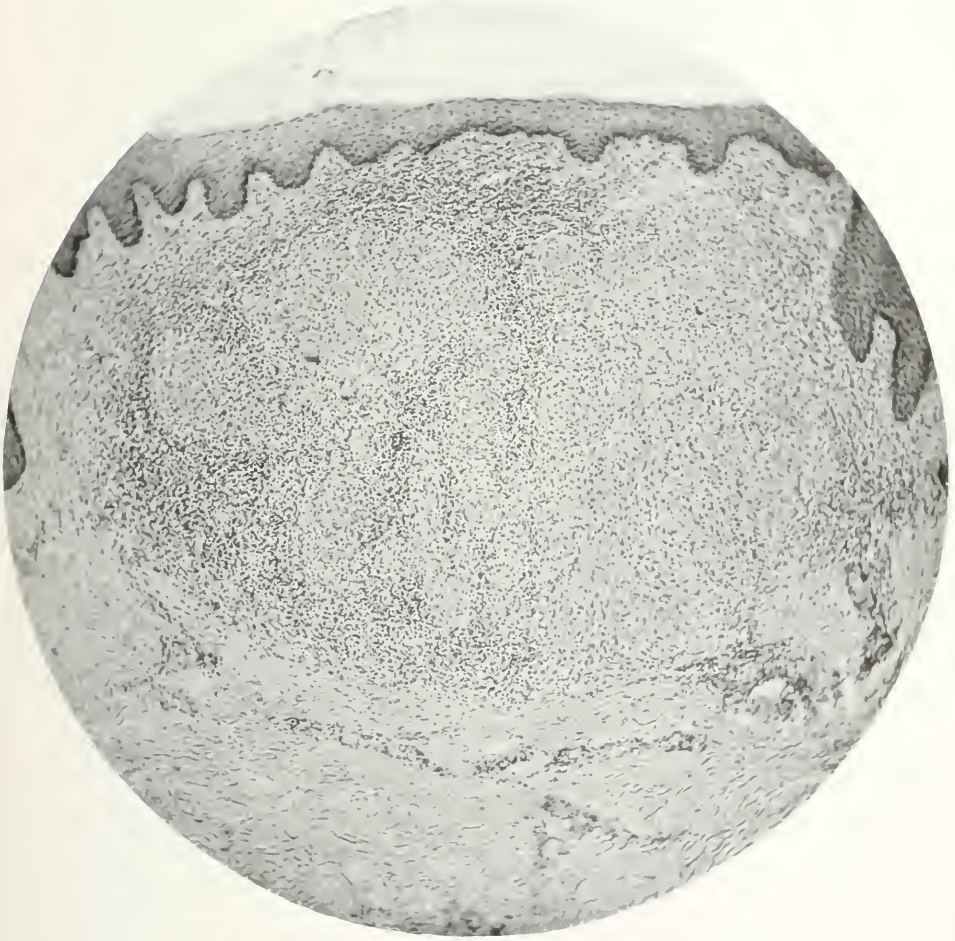


Fig. 7.

Lupus Nodule in Scar Tissue.

Zeiss 16 mm., Co. Ocular 4.

Recurrence, with typical tubercle formation in cicatrix of a treated lupus vulgaris.

PLATE X.—To Illustrate Article on Histological Studies in Some Types of Cutaneous Tuberculosis, by JOHN A. FORDYCE, M.D.



Fig. 8.

Tuberculosis Verrucosa Cutis.

Zeiss Planar 20 mm.

Showing enormous epidermic hyperplasia with whorls of horny tissue and intra- and sub-epidermic miliary abscesses. The granulomatous infiltration of lymphocytes, plasma and giant cells is limited to the superficial layers of the corium.

the skin secondarily, by extension from a diseased focus in the underlying structures, as lymph nodes, bones, joints, etc. The commonest form is that in connection with lymph node tuberculosis. When the glands break down and suppurate, the overlying skin becomes adherent, reddish-blue and breaks through, discharging a pul-taceous material consisting of necrotic and caseous tissue. The resulting sinuses may persist for years, or the process may progress and form ulcers of various size and shape, with fistulous tracts communicating with the subjacent affected areas. Sometimes typical lupus vulgaris develops around a sinus. Scrofuloderma may occur independently in the subcutaneous tissue as tumors, which may attain the size of a pigeon's egg and involve the underlying skin. They are painless and later suppurate. Sometimes they occur along the course of the lymphatics of an extremity and are known as scrofulogummata. They may persist, be absorbed, evacuate, or produce an ulcer. Scrofuloderma of all forms of skin tuberculosis shows necrosis in its purest form. Distinct epithelioid-giant cell tubercles may be present, or a diffuse infiltration of giant cells, plasma cells and polynuclear leucocytes. The last may be collected in abscess formation. Throughout there are areas of necrosis with leucocytes or fragmented nuclei. The vessels are either patent, with thickened walls, or are completely occluded.

TUBERCULOUS ULCERS occur in subjects with pulmonary or intestinal tuberculosis, and obviously their most common location is about the mouth and anus. The lesions consist of miliary papules, which break down and produce shallow, irregular ulcers with an uneven granulating base and soft edges. While indolent, they show a decided tendency to progression.

MILIARY TUBERCULOSIS of the skin is embolic in character, is rare, and seen chiefly in children. It consists of disseminated lesions, which may be macular, papular, vesicular or pustular in type and terminate in ulceration. In another variety, which is post-exanthematic, especially following measles, the lesions are more or less acneiform in character and undergo involution or ulceration. They may be clinically indistinguishable from lupus vulgaris, or they may simulate a nodular syphilide.

CORRESPONDENCE.

FAR ECHOES FROM THE XVII INTERNATIONAL CONGRESS OF
MEDICINE IN LONDON.

To the Editor.

To take the boat back home I went to Liverpool, where I remained two days. I felt it my duty to pay a visit to the dean of the dermatologists of that city, my colleague, Dr. Stopford Taylor. His absence at the meetings of the Dermatological Section of the International Congress had been conspicuous, and I had greatly missed his presence.

It was my privilege to see Dr. Taylor's dermatological museum, for which two large rooms are used. A large collection of photographs of the rarest diseases of the skin in their different stages are arranged on the walls. Many glass show-cases contain elegant wax models made by MacKenna. The most important are those representing cases of pityriasis rubra pilaris, pityriasis rosea in all its varieties, erythema multiforme, lupus erythematosus, lupus vulgaris, tuberculides, etc. The moulages are so well executed that they need no labels to be recognized.

Leaving Dr. Taylor's office, I proceeded to the Skin Hospital. It was founded in 1899 by Dr. Taylor. It is an unpretentious frame building on Pembroke Place, built on a lot 100 feet front by 200 feet deep. It contains two waiting rooms for the patients, a large, well lighted consultation room, one room for medical topical applications, two small dressing rooms for the patients, one drug room to fill out prescriptions and dispense remedies, and one room for the X-ray and Finsen light administrations. On the upper floor are several bedrooms to accommodate from 8 to 12 patients, who require rest in bed for constant treatment.

In the hospital they have 3,000 newly registered patients, with 27,000 attendances every year.

Once a week Drs. Taylor and MacKenna hold clinics for the benefit of the students and of the medical practitioners. The institution is self-supporting, obtaining some financial aid from the moderate charges on the medicines and from the fees of the students. The institution receives also some fees from the Insurance act, which is regarded with great satisfaction by the physicians as well as by the patients. The patients have their blanks, which are filled by the physician in attendance, who marks down one or two shillings, which later is paid by the Insurance.

At the clinic on that day, appeared several cases of tinea favosa, tinea trichophytina, alopecia areata, a number of cases of lupus vulgaris and lupus erythematosus, one case of dermatitis herpetiformis, one of eczema universale and several cases of impetigo of the face and scalp. Patients with syphilitic ulcerated gummata are always present, and it must be said that syphilis is really rampant.

I was greatly interested in a kind of dressing used for the face; it consists of a mask made out of lint, covered with a thick layer of starch and boracic acid, over which is a layer of tarlatan. Three tablespoonfuls of starch with one teaspoonful of boracic acid are dissolved in one pint of water and boiled until a thick glue is obtained. This is spread on the lint and covered with tarlatan. A piece is cut off the size and shape of the face, cutting the holes for the eyes, nose and mouth in the form of a mask. In this way it is applied, and left for 24 hours. It, of course, must be changed every day. Cases of lupus with thick, dirty crusts are cleaned in a few days under this simple dressing.

Dr. Stopford Taylor agrees with me that chrysarobin applications in psoriasis are not of much value, often dangerous and sometimes harmful, increasing, with their irritant action, the severity of the psoriatic eruption. He uses a mixture

of salves in equal proportions, consisting of Unguent. picis (coal tar), Unguent. hydrarg. nitr. dilut., Unguent. acid. salicyl., Unguent. glycer. plumb. He relies a great deal upon the beneficial action of massage.

In the treatment of lupus vulgaris, he relies a great deal upon kataphoresis, and I saw several cases so treated nearing recovery. He uses a pad connected with the negative pole, saturated with a 10% solution of chloride of zinc on the skin, and 2% on the mucous membranes. Its application caused the formation of blisters on the tubercle nodules, which later are covered with the mask of borated starch.

Electrolysis is used quite extensively for nævi and small tumors of the skin. In the same way, CO₂ is constantly at hand for similar affections.

Radium is used in cases of epithelioma and rodent ulcers. Dr. Taylor had a case of epithelioma covering the entire upper lid of the left eye. The patient goes to the office in the morning and keeps the radium on the eyelid until evening, when the office is closed. He had already received three applications, and the middle of the lesion seemed somewhat better. I hardly believe that our American patients would have sufficient patience to spend the entire day in the doctor's office for the application of radium in this manner.

The little visit to my friend Dr. Taylor fully repaid me, and I feel greatly indebted to him for his courtesy and consideration.

A. RAVOGLI.

SOCIETY TRANSACTIONS

NEW YORK ACADEMY OF MEDICINE, SECTION ON DERMATOLOGY.

WILLIAM B. TRIMBLE, M.D., *Chairman.*

Regular meeting, Mar. 4, 1913.

Dr. H. Noguchi read a paper entitled, Additional Studies on the Presence of Spirochæta Pallida in General Paralysis and Tabes Dorsalis. (*Journ. Cutan. Dis.*, Aug., 1913, p. 543.) The reading of the paper was accompanied by lantern slides and a microscopical demonstration.

Dr. FORDYCE, in the discussion, said that he was much pleased to see Dr. Noguchi's demonstration and believed it marked a new epoch in our knowledge of syphilis of the nervous system. Since the Wassermann reaction had come into general use, syphilographers were convinced that both paresis and tabes were due to the direct effect of the spirochætæ and were not to be classed as indirectly caused by the syphilitic virus. This view was now confirmed by the discovery of spirochætæ in the brain. He believed it would be eventually proven that tabes was, in practically every case, secondary to a syphilitic meningitis. The results of spinal punctures made in the various stages of tabes showed that in the majority of cases there was an active process present. These findings afforded us more hope of arresting the progress of the disease than the old belief that tabes was a primary neurone degeneration, produced by the toxic products of the spirochætæ.

Dr. LAPOWSKI asked if it was easier to detect the spirochætæ in fresh brains, or in those preserved for a long time.

DR. POLLITZER said that this announcement would mark the closing of an epoch in the history of the pathology of syphilis; that it marked the passing of the so-called parasyphilides. General paresis was now shown, and he predicted that tabes would soon be shown, to be a manifestation of syphilis itself, and not the secondary effects of a syphilitic toxine. It was noteworthy that in nearly all of Dr. Noguchi's positive case, the disease had run a rapid course. This made it probable that in the prolonged cases the spirochætæ disappeared, just as the bacillus lepræ disappeared from the nerves in older cases of leprosy, leaving behind the degenerative changes which continued progressing indefinitely.

DR. NOGUCHI, closing the discussion, said that it was easier to find the spirochætæ in brains preserved for a long time than in fresh brains, because in the former the nerve tissue stains more feebly than in the new, while the organism stains more deeply.

SYPHILITIC PERIOSTITIS OF THE RIBS. Presented by Drs. MacKEE AND WISE.

The patient, a married man, was 37 years of age. He was from Dr. Fordyce's clinic. He indulged excessively in alcoholic drinks. He had a chancre and a generalized macular eruption 10 years ago. At that time he took mercury by ingestion for a period of 8 or 10 months. Four years ago he had an ulcerating gumma on the back. During the past 4 years there were several similar ulcers which left scars. "Mixed treatment" was taken to heal the ulcers and when healing was complete the treatment was discontinued. The Wassermann reaction, performed by Dr. Mandel, was positive. When presented to the Section, there was a tumor on the right lower ribs in the axillary line, about 2 inches below the level of the nipple. The mass was hard and measured 4 by 7 inches. The duration was 5 months. There was practically no pain and the overlying skin was normal. A radiographic examination of the affected region revealed a marked proliferative periostitis.

CASE FOR DIAGNOSIS. Presented by Dr. FORDYCE.

T. B., aged 23; born in Germany. The family history was negative. The patient had tuberculosis of the wrist 10 years ago, leaving the joint partially ankylosed. Seven years ago she had indolent lesions on the hands and legs, which lasted 3 or 4 months. Her trouble at the time of presentation began 5 years ago, with the development of bullæ on the hands and toes or where pressure was made, or after slight trauma. Several months later, bullæ appeared in the oral cavity, leaving erosions especially on the dorsum and side of the tongue and on the palate. This condition had persisted up to the time of presentation with a gingivitis of varying severity causing the patient much discomfort, and was uninfluenced by treatment. During the past 4 years she had had numerous attacks of a generalized erythema multiforme, purpuric on the lower extremities. Large bullæ developed, sometimes over the sites of the erythematous lesions and sometimes on the normal skin. The parotid glands and cervical lymph nodes from time to time enlarged markedly and occasionally there was a generalized adenopathy. The skin of her hands was atrophic, red, scaling and in places, fissured. Her feet presented a similar condition and the nails of the right foot had been shed. Her general health was depressed and she weighed 99 pounds. Her menstrual periods were irregular; she was constipated and the urine contained traces of albumin.

DR. POLLITZER called attention to the fact that there was no systemic disturbance in this patient, that even the blood count was normal, and he suggested the possibility of a diagnosis of dermatitis factitia.

DR. LUSK said that this was a case of epidermolysis bullosa, and that some bullæ had been caused by the pressure of a shoe.

DR. TRIMBLE said that the lesions and after effects in this case were much like those of epidermolysis bullosa; and if the disease had begun in infancy he would be inclined to that diagnosis. The duration in the present case being 5 years was, of course, a point against such a diagnosis.

DR. FORDYCE said that the patient had been under his observation for 5 years. Seven years ago she had an inflammation of the wrist, possibly tuberculous. A year and a half later she developed erosions in the mouth and a gingivitis which simulated a mercurial stomatitis. Later on she developed bullous lesions of the skin which came out in successive crops. At various times she had had eruptions of the erythema multiforme type, sometimes accompanied with purpura. He had made cultures from the lesions, blood examinations, examinations of the urine, all of which had given negative results. The patient at no time had developed a temperature nor had the constitutional disturbances from mercury. He could only theorize regarding the causation of the trouble and suggested that the skin and mucous membranes might have been sensitized to some proteid or that an infection of some kind, starting in the mouth, had produced the skin condition. He did not think it a case of epidermolysis bullosa on account of its origin late in life, the occurrence of lesions in the mouth and their appearance without previous trauma.

SCROFULODERMA AND TUBERCULOSIS OF THE SKIN. Presented by DR. LAPOWSKI.

G. R., age 1½ years; duration, 4 months. There was no family history of tuberculosis. He had a longitudinal tubercular abscess of two months' duration under the chin, and miliary tuberculosis of three months' duration on the lower lip.

GUMMATA OF THE THIGH. Presented by DR. LAPOWSKI.

The patient had no previous history of any syphilitic infection. The illness for which he was presented, started January, 1912, with chills and pains in the upper and lower extremities, the skin being normal.

In February, 1912, the patient entered a hospital, during which time the legs were swollen, purple in color, from the inguinal region down to the malleolus. In April, 1912, while still in the hospital, the inner surface of the left leg turned black and ulcerations began, which were still present. In May, 1912, a skin grafting operation (from his own right thigh and from his brother's) was performed; the grafts did not take. In July, 1912, the patient left the hospital with lesions scattered on the left thigh and crus. During his stay in the hospital he received a daily injection in the thigh. In August, 1912, he entered another hospital with the lesions in the same condition as when he left the first hospital. During his stay, he received 15 injections in the buttocks. From November up to 6 weeks ago he has been treated in the dispensary. The Wassermann reaction was negative. When first seen, 6 weeks ago, there were lesions scattered over the thigh and crus, these lesions being, (1) weeping dermatitis; (2) purpuric spots, superficial, follicular, from pinhead to penny size; some lesions being round, penny-sized and some millet-sized; (3) deep ulcerations; these were separate, disseminated and annular; also penny to half-dollar sized and serpiginous, arranged in patches and in deep longitudinal lines. The thigh was swollen, with hard, infiltrated, sharply defined borders under the affected skin,—the skin itself not being swollen. He could not walk nor bend the knee. The first injection was given 6 weeks ago, consisting of calomel, 0.4 cc. of a 10% suspension.

DR. POLLITZER said that, according to the patient, the lesions began as punctate lesions like the small hemorrhagic spots now visible above the foot. No such lesions were known to occur in syphilis.

PATIENT ILLUSTRATING OPERATIVE TREATMENT OF EXTENSIVE
EPITHELIOMA OF THE LOWER LIP. Presented by DR. JANEWAY.

The tumor started to grow in the Fall of 1911. He received various forms of treatment, including caustics; he was operated upon on August 3rd, last. The central portion of the lower jaw and the whole of the lower lip was removed. Subsequent steps will include the replacement of the lower lip as illustrated by another patient.

PATIENT ILLUSTRATING OPERATIVE TREATMENT OF TWO LARGE
EPITHELIOMAS OF THE NECK. Presented by DR. JANEWAY.

The size of the growth when operated upon in the Fall of 1909 was represented in the photographs. The one on the back of the neck started to grow as a small scab in 1885; he received various treatments, including X-rays, until operated upon in the Fall of 1909. The one upon the side of the neck, below the right ear, began to grow in 1901. On account of the location of the growth upon the nose, no radical operation was ever undertaken for it. It had received various forms of treatment and at the time of presentation was being treated by X-rays. The patient illustrated by contrast the unsatisfactory character of other than operative forms of treatment.

PATIENT ILLUSTRATING OPERATIVE TREATMENT OF LARGE
EPITHELIOMA OF THE SIDE OF THE FACE. Presented by DR.
JANEWAY.

The growth to which the patient presented was of rapid development. At the time of removal in 1909, it measured 2 inches in diameter and had been in existence for only one year. The patient had had lupus erythematosus for 40 years, for which she has been treated by X-rays and by carbon dioxide snow. The epithelioma started to grow after an unusually severe treatment with the snow.

DR. JANEWAY, closing the discussion, said that from the standpoint of cosmetic effect, the convenience of the patient and the permanency of the cure, no other method was as good as an operation, except in very extensive superficial cases.

PATIENT ILLUSTRATING THE OPERATIVE CURE OF EPITHELIOMA
OF THE FLOOR OF THE MOUTH. Presented by DR. JANEWAY.

The patient had a marked alcoholic history and had been an inveterate smoker. The new growth began in January, 1909. By June, a tumor one inch in diameter existed beneath the tongue and was adherent to the body of the lower jaw, behind the symphysis; also a gland was present under the left ramus of the jaw, the size of a walnut. An operation was performed in June, 1909, and the central portion of the lower jaw was resected and the glands in both submaxillary triangles were removed. Since then the patient had had 3 recurrences and 3 secondary operations, the last of which was in June, 1910. Since that time he had been free from recurrence and appeared to be cured.

PATIENT ILLUSTRATING THE OPERATIVE TREATMENT OF A
LARGE EPITHELIOMA OF THE SIDE OF THE NOSE. Presented
by DR. JANEWAY.

The tumor began to grow in 1894. The patient received various treatments, particularly X-ray treatment, until Nov. 1, 1910, when the growth was the size of a half dollar and had eaten completely through the nose. It was removed on Nov. 1, 1910, by excision and the right half of the nose was replaced by a plastic section from the face. Since that time the patient had been well.

CEREBRAL SYPHILIS. Presented by Drs. MacKEE AND WISE.

The patient, a married man, 50 years of age, was from Dr. Fordyce's clinic, where he had been on several occasions for cutaneous syphilis. He contracted the disease 20 years ago. One year ago he began to develop aphasia which, in a few months, became very pronounced. There had been considerable improvement under antisyphilitic treatment. The Wassermann reaction, performed by Dr. Mandel, was positive.

CASE FOR DIAGNOSIS. Presented by Dr. BECHET.

F. K., aged 40 years, while shaving about one year ago, cut off the head of a small papule on the right cheek. Since then he has never been free from some irritation at that point. For the past 3 months he noticed an induration on the site of the original trouble. When first seen on Jan. 29, 1913, he presented for examination a freely movable, indurated, flat, infiltrated mass, about $1\frac{1}{2}$ inches in diameter, situated on the right cheek. There was considerable redness of the skin over the lesion; the mass was painless. Outside of the redness and a few patulous follicles, the skin was apparently normal. The condition at the time suggested a circumscribed scleroderma. At the time of presentation there was a marked change for the better, and the lesion had apparently shrunk in size.

Dr. POLLITZER said that this was a circumscribed scleroderma; it lacked the violaceous border and the waxy surface, but on palpation felt exactly like the mass produced by that disease. If the patch were large enough to cover a considerable area of the trunk, would there be any doubt of the diagnosis?

Dr. BECHET, closing the discussion, said that when first seen, this case presented large, patulous, follicular openings. These had closed up under treatment, giving the appearance of scars. In his opinion, the lesion strongly suggested a circumscribed scleroderma.

LUPUS ERYTHEMATOSUS; KROMAYER LAMP TREATMENT. Presented by Dr. CLARK.

Mr. P., age 30 years, had had lupus erythematosus for 8 years. For the first 3 years the disease was now better, now worse, but for the past 5 years, it persisted constantly, with no tendency to improvement and it was gradually spreading. The patient was presented to show the active effect of the Kromayer lamp treatment, 10 days ago.

LUPUS ERYTHEMATOSUS; KROMAYER LAMP TREATMENT. Presented by Dr. CLARK.

Mrs. O., aged 40 years. The lupus erythematosus began on the left side of the nose 8 years ago and had gradually spread. The patient had been through 4 months' treatment with iodine locally and quinine internally, without any effect. The patient showed the active effect of applications of the Kromayer lamp, covering a period of 10 days.

NEVUS; KROMAYER LAMP TREATMENT. Presented by Dr. CLARK.

Mr. A., aged 31 years, presented a vascular nevus. Various treatments had been applied and some of the discoloration had been removed, but always leaving a scar. The spot on the left temple was treated once with the Kromayer lamp. The next day the whole area was darker and dark tortuous vessels appeared under the skin, due probably to the coagulation of blood in the veins. After three weeks, the reaction subsided, leaving the skin over the nevus lighter than elsewhere.

TUBERCULOSIS OF THE SKIN. Presented by Dr. HEIMANN.

The patient had had the eruption 4 years, following measles and was first seen in December, 1909. The Wassermann reaction was negative; the von Pirquet was positive. There were infiltration in the right apex. Scrapings from the lesions showed acid fast bacilli, but no spirochæta. There was a slight improvement under inunctions of mercuric ointment and potassium iodide internally, which treatment was given for one month. A biopsy showed lupus. The patient was given syr. ferri iodidi, and injections of tuberculin B. E. were started. These were given at weekly intervals, beginning with 0.0000001 mg., and continued for 9 months, when the patient disappeared, the eruption being somewhat better. The dose at that time was 0.001 mg.

Dr. WINFIELD said that he had had this patient under observation for several years. The Wassermann reaction in repeated trials was always negative. The patient had had no previous eruption, except that he was said to have had measles in childhood. The diagnosis, which at first was syphilis, was changed to tuberculosis of the skin. The patient improved greatly under tuberculin and was almost well, but then relapsed.

MOLLUSCUM FIBROSUM. Presented by Drs. MacKEE AND WISE.

The patient was a married man, 49 years of age, born in the United States. He had been under observation at Dr. Fordyce's clinic for several years. He was literally covered with soft tumors, some of which were no larger than the head of a pin, while others were 2 inches in diameter. All the tumors were flesh colored. The very small ones were quite firm, while the larger ones were soft. Many of the medium-sized tumors were compressible. There was no bluish discoloration nor was there any pigmentation. The man was apparently normal, both mentally and physically. The tumors began when he was but a few years of age and had gradually increased in size and number. The back, abdomen and chest were mostly affected, but there were many tumors on the face and extremities. No other member of his family was similarly affected.

LENTICULAR SYPHILIDE. Presented by Drs. MacKEE AND WISE.

The patient, an unmarried man, 25 years of age, was from Dr. Fordyce's clinic. He presented grouped, follicular papules scattered over the chest, shoulders and back. In many places there was an annular and circinate configuration. There were many erythematous macules, some of which were annular in outline, on the outer surfaces of the arms. The skin was very irritable, there were a few urticarial wheals and pruritus was complained of. There was considerable pain in the tibiæ. The right eye exhibited a marked iritis. The "mottled chin" of syphilis, as described by Trimble, was plainly depicted. In addition, there was a general adenitis, anæmia, sore throat and the remains of a penile chancre.

HUTCHINSON'S TEETH. Presented by Drs. MacKEE AND WISE.

The patient was a girl, 18 years of age, born in Hungary. She entered Dr. Fordyce's clinic for the treatment of a mild attack of eczema. Each of the upper and lower central incisors contained a deep central notch. There was no history nor visible signs of other luetic stigmata. The Wassermann reaction, performed by Dr. Mandel, was positive.

SYPHILITIC DESTRUCTION OF THE NOSE. Presented by Drs. MacKEE AND WISE.

The patient, a widower, was 72 years of age, and was born in Ireland. He was from Dr. Fordyce's clinic. He contracted syphilis 30 years ago. Three years ago he developed an ulcerating gumma of the nose, together with several

similar lesions on the scalp. The scalp lesions healed under "mixed treatment," leaving disfiguring scars, but the lesion on the nose persisted. When presented to the Section the patient exhibited a complete destruction of the left ala and the lower part of the septum, together with a loss of most of the cartilagenous portion of the nose. There was considerable scarring, but no atrophy or pinching as occurred in lupus vulgaris. The case was presented to show the different picture produced by the destructive nasal lesions of syphilis and lupus vulgaris.

DR. WILLIAMS reported that the patient from whom a specimen was presented at the last meeting, had returned the week before, and that the mass had disappeared under local application of white precipitate ointment and a "blood medicine" of unknown nature. The specimen was again shown.

DR. POLLITZER said that the slide presented the appearance of a typical epithelioma. The infiltration may have diminished and the surface may have healed over, but the disease would surely return.

DR. JANEWAY said that he was not at all sure that this was a case of epithelioma.

MANHATTAN DERMATOLOGICAL SOCIETY.

April and May, 1913.

LUDWIG OULMANN, M.D., *Chairman.*

HEREDITARY LUES. Presented by DR. OCHS.

The patient was a well-nourished male infant, aged 9 months. About five or six weeks previous to presentation, Dr. Ochs first saw the patient, who presented some mucous plaques around the anus, and also some distinct papules on the scrotum and penis. The speaker said that when he first saw the case he was in favor of the diagnosis he had made, despite the fact that the patient was a very healthy and well-nourished child. He stated that Dr. Howard Fox had made a Wassermann test on both child and father, and that in both instances the reaction was strongly positive. At the time of presentation, the lesions had receded somewhat, not being as marked as they had been 2 months previously. The treatment was entirely antisypilitic, being calomel gr. 1/20 twice a day and ungt. hydrarg. ammoniata.

Dr. Ochs said that the reason why he had presented the case, and why he thought the case particularly of interest was because of the fact that this affection had taken place in such a well-nourished child. He added that children who were ordinarily the victims of this disease were feeble and rickety looking.

DR. OULMANN said that in regard to the good development of this child he wished to mention a case under his observation, in a little girl. The X-ray examination of the tibia, which was swollen after an accident, showed a sus-

picion of lues. The Wassermann in this case was positive, the father and mother of the child also having a positive reaction, and the child was exceedingly well developed.

ECZEMA SEBORRHÆICUM PSORIASIFORME. Presented by Dr. KINCH.

The patient was a female adult, aged 50, well nourished but anæmic. She never had had any skin eruption until one year previous to her presentation to the Society. During the last period her trouble had persisted with varying intensity. On the lower part of the abdomen, hips, fronts of thighs and popliteal spaces were large areas of inflamed, thickened and rugous skin, exfoliating freely. Sometimes these patches would be moist. Their borders were well defined. The folds of the groins were not involved. Similar patches, much thickened and elevated were on the ulnar surfaces of both wrists. The inflamed areas were very itchy, especially at night.

Dr. GEORGE HENRY FOX said that the case presented by Dr. Kinch was a most remarkable one and that in no individual case of eczema had he seen so many distinct types of the disease. On the thighs was a typical eczema marginatum. On the palms could be seen the so-called washerwoman's eczema or eczema fissum. On the anterior aspect of the wrists were patches of orbicular eczema. Dr. Fox said that this patient's scalp was about as clean as that of the average woman of her class and that the eruption elsewhere did not originate from any seborrhœic condition of the scalp, as many were inclined to believe.

NÆVUS PIGMENTOSUS ET PILOSUS. Presented by Drs. MACKEE AND WISE.

The patient, a child 4 years of age, was from Dr. Fordyce's clinic. There was a dark brown, almost black patch, six and one-half inches long and four inches wide on the left side of the posterior surface of the thorax. The lesion was much thicker than the normal skin and was covered with a growth of rather fine black hair. The surface was smooth, but the lesion contained folds which allowed the collection of dirt and this was the possible cause of the pruritus which was present to a considerable degree. The child was almost constantly rubbing the lesion and it was not unlikely that this was partially, at least, a habit.

Dr. OCHS said he had presented two cases of extensive nævi to the Society, one of the shoulder and the other of the entire body, and that in both the pruritus had been pronounced.

ERYTHEMA INDURATUM. Presented by Dr. OULMANN.

The patient, D. S., a female, aged 31, was married and had two healthy children. Her husband was also healthy. As a child the patient suffered from a "sore" mouth, scrofuloderma of the neck and was treated for pneumonia. A year previously she had been successfully treated for a tuberculide of both arms. The lesions present when shown

to the society were more marked in the Spring and Fall, and appeared on both legs, mostly dime sized, which would break down and leave a brownish-blue scar. A von Pirquet test was strongly positive. There were also some pinhead-sized ulcerations in the mouth, of a yellowish color and very painful.

Dr. Oulmann said that he had vaccinated the patient with tuberculin for 2 months and that the patient had received about 8 injections altogether. The speaker stated he was certain that he saw therapeutic results and that the tuberculide was fast disappearing.

Dr. MacKEE said that he had been experimenting with tuberculin therapy at Dr. Fordyce's clinic for nearly five years. A number of cases of Bazin's disease had been treated by injections of tuberculin, the treatments being given every five to seven days. The first dose was .00001 mg., the dose being increased geometrically until the patient was well or the point of toleration reached. Every one of these patients had completely recovered within eight months. With respect to the papulo-necrotic tuberculide the picture was quite different. Here the result was absolutely negative, in spite of the fact that the tuberculin had been employed both arithmetically and geometrically and even combined with streptococcic and staphylococcic vaccines. Only the tubercle bacillus emulsion had been used, for it was the consensus of opinion that tuberculin immunized against tuberculin and not against tuberculosis and that all of the reliable tuberculins had about the same effect in this respect. In the series of cases treated at Dr. Fordyce's clinic no medication other than tuberculin was given, either internally or externally. The patients were not even allowed to take a vacation. Many of the patients suffering from papulo-necrotic tuberculide were treated for over two years without the slightest benefit being derived. The eruption fluctuated during the treatment as it always did in this disease, and at times it would cease to be active, only to appear again and again.

In regard to employing the Moro or von Pirquet test for therapeutic purposes, the speaker said that such a measure had been used in Germany, only that the tuberculin was applied directly into the lesion. This resulted in a rather violent local reaction which not infrequently produced a desirable result. The objection to Dr. Oulmann's method was in the administration of about the same amount of tuberculin at each treatment. Not only did he fail to estimate the dose, but there was no way of following how much of the tuberculin reached the general system.

Dr. GOTTHEIL said that the use of the von Pirquet serum for therapeusis was new to him, that he knew of it only as a test.

GUMMA OF UPPER EYELID CLOSE TO INNER CANTHUS.

Presented by Dr. Ochs.

The patient was a female negro adult, 25 years of age. The speaker stated that he showed the case because of the unusual site of the gumma. He said that the lesion had been present for 3 weeks and that he had another case of a similar nature under his observation in which, besides the lesion on the upper eyelid there was on the forehead a serpyiginous ulcerating syphiloderma. There was no history of syphilis although the Wassermann was positive. The lesion was reacting to mercury. The gumma of the patient presented was about one quarter inch in diameter, caused no pain but a good deal of discomfort.

DR. OULMANN said he would call this case an ulcerative syphilide rather than a gumma.

CASE FOR DIAGNOSIS. PITYRIASIS ROSEA? Presented by DR. GOTTHEIL.

Dora R., aged 12, was first seen on March 31st, when her eruption had been present one week. The chest and abdomen were covered by a multitude of pinhead to pea-sized, irregularly rounded, discrete, slightly elevated, reddish yellow papules, with a very slight greasy scalliness on their surfaces, and which did not itch. There was no tendency to flattening or clearing in their centers, but there was one larger spot, the size of a ten-cent piece, on the chest, which was said to have been the first to appear, in which central retrogression was quite evident. During the week that had elapsed since then a number of new minute lesions of a similar type had appeared on the trunk, and a few on the anterior surfaces of the limbs; there was a slight increase in size of the individual efflorescences. The entire number was at the time of presentation many hundreds. For the two weeks previous the patient had been poorly, appetite bad, tongue coated and bowels constipated. Neither the color, consistency, location or scaling was that of a psoriasis; the diagnosis to the speaker's mind, lay between a guttate parapsoriasis and a pityriasis rosea, with the chances in favor of the latter.

DR. GEORGE HENRY FOX said that the case looked to him very much like the unusual punctate form of pityriasis rosea to which Dr. Gottheil had referred. He said he had repeatedly seen cases which had no discs or rings but only small punctate lesions over the body. He was inclined to support the diagnosis made by Dr. Gottheil and said that the possibility of its being a punctate psoriasis could be better judged after the lapse of another month.

DR. PAROUNAGIAN did not agree with the diagnosis of pityriasis rosea on account of the presence of the lesions on the scalp and face. The punctate, circumscribed, elevated and scaly papules he thought would go better under the diagnosis of acute punctate psoriasis.

DR. OULMANN said he would make a diagnosis of psoriasis guttata; that in a number of these cases the differential diagnosis at the onset was very misleading and that after the disease had progressed a little further this affection would be very plainly identified.

DERMATITIS HERPETIFORMIS. Presented by DR. WEISS.

The patient was a male child, 8 months old. The eruption of dermatitis herpetiformis which was visible both on the face and body had appeared six months previous to the child's presentation to the Society. The lesions started as generalized multiform vesicular eczema, and tended towards grouping and pigmentation. There was pruritus present. The speaker stated that the vesicles did not burst but were undergoing gradual absorption.

DR. PAROUNAGIAN said that his diagnosis would be vesicular eczema, even though these cases do not behave like ordinary forms of eczema, and that they were very trying cases to treat, in many respects resembling Duhring's disease.

Dr. MacKEE said he would regard the case as being one of eczema.

Dr. OULMANN said, so far as he could see, that none of the lesions seemed to show any evidence of scratching, that some of the lesions were grouped and showed the silvery glistening. The speaker said that vesiculation, especially in babies, was sometimes met with in acute lichen conditions.

Dr. WEISS said he did not consider it to be a plain eczema because of the multiformity of the lesions. He said he had tried to differentiate it from erythema and urticaria, and because of the fact that the vesicles did not break as they did in eczema, and the absence of crusts, he thought the diagnosis of dermatitis herpetiformis a feasible one.

ERYTHEMA FIGURATUM. Presented by Dr. PAROUNAGIAN.

The patient, a female adult, was first seen at Dr. Pollitzer's clinic. She presented an extensive erythema, mostly on the trunk, having pretty marked borders with a great deal of urticarial element. The duration was three days, and while the lesions on the chest were somewhat subsiding, the back showed new ones of a similar character.

Dr. GEORGE HENRY FOX said that as the lesions had persisted for three days without any change in the color and character of the eruption he would favor the diagnosis of erythema multiforme in place of urticaria.

Dr. PAROUNAGIAN, in closing the discussion, said he objected to the term of ordinary urticaria, as the lesions remained so long, and that infiltration and exudation would certainly place these cases in the class of exudative erythemas instead of ordinary urticarias.

SARCOMA CUTIS HÆMORRHAGICUM. Presented by Dr. Ochs.

The patient, a small boy, had been presented at a number of previous meetings of the Society, and was again shown because of the further good results which had been produced by the use of Fowler's solution. The violaceous hue of the lesions and their sensitiveness had entirely disappeared. The lesions were beginning to fade and no new lesions or hæmorrhages into the skin had occurred since the previous December.

Dr. GOTTHEIL said that the case was a very remarkable one, when only four months back the growth was apparently extending rapidly, was apparently a true sarcoma, and the boy was practically bedridden. Metastasis was apparently occurring in the neighboring skin, in the glands and the prognosis seemed hopeless. The speaker said he could not attribute the remarkable improvement to the small mouth doses of arsenic that had been given. He said he was now inclined to place the case in the class of sarcoides or so-called hæmorrhagic sarcomas, concerning which it was still doubtful whether they were to be regarded as true malignant connective tissue new-growths, or inflammatory neoplasms of a non-malignant type.

Dr. OULMANN said this case reminded him of a case of angiosarcoma, which had been treated by him with arsenic injections six years ago, and that the patient had been well since that time. This case had induced him to recommend arsenic in Dr. Ochs's case.

ANNULAR PSORIASIS OF BOTH LEGS. Presented by Dr. WEISS.

The patient was a girl, 12 years of age. About 6 months before her presentation to the Society the eruption began with an itching sen-

sation on the right leg. A scaling rash appeared in coin-like patches, followed by circular confluent patches with reddened borders and normal involuted centers. The borders carried scales which were easily detachable. There were also lesions on the elbows one week previously. The case had been shown on account of the peculiar localization of the lesions.

ACNE CACHECTICORUM. Presented by Drs. MacKEE AND WISE.

The patient, who was from Dr. Fordyce's clinic, was a married woman, 48 years of age. Her occupation was housework. She exhibited an eruption over the back, from the shoulders to the buttocks, which was of two months' duration. The eruption consisted of soft, dark red papules ranging in size from a head of a pin to a split pea. For the most part the lesions were discrete, but there was some coalescing into patches and a little grouping. Nearly every papule contained a central punched-out ulcer. There were also numerous round scars, the remains of former lesions. When the patient first entered the clinic the possibility of a drug eruption was seriously considered, but this could be excluded because the woman had taken no medicine with the exception of some capsules, which upon analysis were found to contain arsenic, gentian and iron. The patient was not in good general health and there was a rather marked albuminuria.

BUTTERFLY KELOID. Presented by Dr. OCHS.

The patient was an adult negress, aged 28. The speaker stated that this eruption differed in its course to any he had previously shown. Ten years before presentation to the Society the patient had a small papule on her chest, which was of pruritic nature and she scratched it. While the healing process was going on the keloid developed, which had been growing on the chest up to the time of presentation. The keloid extended from the root of the neck to the under side of the sternum and from the right to the left shoulder and looked like a large butterfly. When shown it was still growing. Dr. Ochs said he would like to ask Dr. MacKee's opinion in reference to healing it with the X-ray.

Dr. MacKEE said that the so-called spontaneous keloid, if small, yielded to radiotherapy with reasonable certainty. The keloids developing upon a scar, particularly if they were dense and in adults, were much more obstinate. In any event 20 to 30 Holzkecht units, divided into 6 or 8 treatments at four week intervals would be required. A Benoist No. 8 or 9 ray should be employed and it was often advantageous to employ a filter of one or two millimeters of aluminum. If the tumor were a large one it should be ablated and the X-ray administered as a prophylactic measure.

Dr. MacKEE said he did not at all agree with the previous speakers. Although he employed the X-ray in therapy to a greater extent than most dermatologists, he did not consider himself an enthusiast by any means. As a result of several years of study he was of the opinion that the X-ray was almost

indispensable in some dermatoses, useful in other skin affections and useless or even harmful in others. It was not only necessary to know how to properly apply the ray but it was equally essential to know when to use it. He never treated skin lesions with the X-ray when they would yield to any of the more generally used and simpler remedies. Most of the harm having resulted from the application of the X-ray had followed a faulty technique. He had known, for instance, of cases of epithelioma, keloid, lichen planus, acne, etc., where from 30 to 150 X-ray treatments had been given, without the slightest estimation of the total amount of ray administered. If the amount of X-ray absorbed by the skin was large enough, epithelioma would be the result, and yet this amount of ray had been administered to lupus vulgaris and epithelioma. This was probably one reason why many cases of epithelioma increased in malignancy and epithelioma developed in the scar of a lupus vulgaris after the injudicious use of the fractional-dose X-ray method. Recent improvements in apparatus and technique allowed the administration of practically the exact curative dose in any given lesion and, excepting rare accidents, which might happen to the most experienced operator, the untoward effect of the X-ray was to a large extent if not wholly, a thing of the past.

BUTTON-LIKE EPITHELIOMA. Presented by Drs. MacKEE AND WISE.

This patient was a woman from Dr. Fordyce's clinic, who had been presented at the New York Dermatological Society. She was 49 years of age and exhibited a round tumor, about one inch in diameter and elevated above the surface one-half inch, on the nose near the canthus of the left eye. The lesion was firm and waxy and studded with large pearly nodules. The duration was two years. The lesion was demonstrated as an unusual type of basal-celled epithelioma. Dr. MacKee said that when the patient was presented at the New York Dermatological Society, Dr. Robinson considered the lesion to be the early stage of the crateriform type of rodent ulcer.

Dr. Gottlieb said that this case presented special points of interest, inasmuch as all the ordinary features on which they were accustomed to base a diagnosis of epithelioma, were lacking. He had presented a somewhat similar case to the society some time ago, in which there was a single large bean-sized, whitish, fairly soft, non-ulcerated tumor on the cheek under the right eye. All manner of diagnosis had been made, but biopsy proved the case to be a pure epithelioma.

CASE FOR DIAGNOSIS. LEPROA? Presented by Dr. Ochs.

The patient was an adult negress, 26 years of age. She was born in Virginia and had been under observation for three months. When she came to the clinic she had what apparently looked like an acneiform lesion of the face. The patient when presented had a marked leonine appearance. The lesions were confined to the right side of the cheek as well as the chin and the nose. These areas were fairly well infiltrated. There was an apparent enlargement of the ulnar nerve, but up to the time of presentation, no areas of anæsthesia or hyperæsthesia were noted.

DR. GOTTHEIL said that he had seen this patient before in the Harlem Hospital Clinic, and had been at once struck with the "leonine" facies. There were indistinct yet evident soft nodules in the supraciliary ridges, cheeks and lobes of the ears; the hair of the eyebrows had fallen in a place where there was a nodule; and though there were no anaesthetic areas and no nerve trunk thickenings, he had no hesitation in making a diagnosis of probable leprosy.

DR. GEORGE HENRY FOX said that although he would not make a positive diagnosis on so brief an examination, the expression of the patient's face suggested lepra at first glance. He said the lesions on the cheek and especially the one over the eyebrow, combined with tenderness of the ulnar nerve would tend to verify the diagnosis of leprosy.

DR. MACKEE said that in this case, in which the diagnosis of leprosy could be seriously entertained, a very careful microscopical study should be made, for, if the diagnosis of leprosy could be established, and if the history as related by the patient were reliable, it would negative the persistent assertions that the disease could not be acquired in the North Temperate Zone of the United States.

LUETIC ORCHITIS AND EPIDIDYMITIS. Presented by DR. OULMANN.

This patient, a male adult, had been under observation for a year previous to his presentation to the Society. His blood was examined at that time and the Wassermann was found to be strongly positive. He was again referred to the speaker two days before his presentation and had been treated with saline injections. There was a luetic ulcer of the leg of very large size and other luetic stigmata. The testicle and epididymis were painful and swollen, mostly due to the injections.

LARGE SERPIGINOUS SYPHILIDE. Presented by DRs. MACKEE AND WISE.

The patient was a married man, 47 years of age, from Dr. Fordyce's clinic. He had a chancre followed by secondaries at 15 years of age, for which "pills" were taken over a period of four months. For 14 years, so far as he knew, he took no medicine for syphilis. Occasionally he would develop an ulcer on various parts of the body which would heal spontaneously before acquiring a serious aspect. Sixteen months ago, a small nodule appeared in the middle of the anterior surface of the right thigh. This nodule ulcerated and healed in the centre, but new nodules developed in the border. The lesion extended peripherally until at the time the patient was presented to the Society, it involved the entire thigh from the anterior superior spine to the knee and extending around the lateral surfaces almost to the posterior surface of the thigh. The color of the lesion was bluish in the centre with a red margin. The margin was studded with nodules, open ulcers and crusts. The centre of the lesion was composed of scar tissue in which there were several ulcerating nodules. These relapsing lesions in the scar were very suggestive of tuberculosis. The lesion was improving very rapidly under the influence of anti-syphilitic treatment.

DR. GOTTHEIL said that the interesting feature of this case, providing that it was a tertiary syphiloderm, was the fact that new ulcerative lesions had developed in the scar tissue already passed over by the destructive process. This was characteristic of tuberculous and lupoid skin affections, but not of syphilis.

ACNE KELOID. Presented by Dr. Ochs.

The patient was a negro boy, aged 19, who had come to the Harlem Hospital Clinic only a week before presentation to the Society. He had an extensive acne keloid lesion of the nape of the neck with innumerable small, wart-like excrescences confined to the entire hairy region of the scalp. The duration of the affection had been 3 months.

BLASTOMYCOSIS. Presented by Dr. OULMANN.

J. S., 17 years of age, farmer by occupation, had never been sick before. About five weeks previous to his presentation he noticed a number of small red patches on his left forearm, which were slightly raised and discharging pus. Some of these round moist patches dried up, got smaller and healed up, while others increased in size and height, covering the middle of the left forearm. All the lesions were round, circumscribed and confluent. The discharge was non-odorous, and the pus was mixed with blood. The margins of the lesions were not especially infiltrated, there were no excrescences of any kind and the surrounding tissue was not inflamed. The patient was being cured under potassium iodide and X-rays.

BLASTOMYCOSIS. Presented by Dr. PAROUNAGIAN.

The patient, male, aged 23, was of Russian birth and a tailor by occupation. He was first seen at the Gouverneur Clinic. He had a lesion on the dorsum of the right hand, about the size of a dime, elevated and somewhat infiltrated, with a purplish border. The surface of the lesion was rough and upon slight pressure pus would ooze out from numerous foci. The duration had been three months. Microscopic examination confirmed the diagnosis. A culture was taken, the result of which had not yet then been known.

LUPUS ERYTHEMATOSUS. Presented by Dr. PAROUNAGIAN.

Mr. G., aged 44, was a tailor, of Russian birth. The duration of his skin affection had been about two years. It appeared first on the left cheek in the form of a discrete patch; two others followed and the last lesion appeared on the eyebrow. The unusual feature of the case was the lesion on the eyebrow, which had thick, whitish scales, strongly resembling psoriasis.

LUPUS ERYTHEMATOSUS OF THE EARS. Presented by Dr. WISE.

The patient was a male adult and had had the disease for two years. He was shown chiefly on account of the peculiar limitation of the disease

to the inner surfaces of the shells of both ears, although several sears of healed lesions were present on both cheeks. Treatment with carbon dioxide snow had given excellent results.

PSORIASIS WITH PRURITUS. Presented by DR. OULMANN.

The patient was a male adult, 74 years of age. The disease had been present for 40 years and the lesions which gave him trouble at the time of presentation to the Society had lasted 7 years. There was on the extensor side of both arms, from the acromion process to the wrist, and around the wrists, one line of a "coat of mail" which was formed by deep infiltration of long standing. These hard masses existed also on the back, abdomen, buttocks, lower legs, and they were more or less covered with scales of a very large size. There were other smaller psoriasis lesions of normal appearance. The large lesions itched though there was no eczema present.

CASE FOR DIAGNOSIS. (SCROFULODERMA?) Presented by DR. KINCH.

The patient was a male child, 13 months of age. The child had ulcerated lesions behind and below the right ear. The mother of the patient stated that the lesions had been present five or six weeks. The exhibitor said he thought it was an ulcerating scrofuloderma.

DR. GOTTHEIL said that the term tuberculosis had better be reserved for tuberculosis verrucosa and tubercular ulceration. Scrofuloderma was an old and perhaps not very definite term; but it had been used for many years to designate certain skin affections undoubtedly closely related to tubercular processes, if not directly dependent on them, and had probably better be retained.

DR. PISCO said that in his experience he had obtained excellent results with a very fine sharp curette and the scarlet red, of a 5% strength, which cleared the eruptions up beautifully. He said he left the application on for 48 hours each time and then removed the same, spreading a 10% balsam Peru ointment on the lesion for 24 to 48 hours. He said that of course a very fine sharp curette only must be employed, and the area must be bandaged all the time.

DR. OCHS said he had seen very good results in these cases with the use of a creosote ointment, 5% to 25% in strength, and that within three to five weeks they would usually heal up.

DR. GOTTHEIL said, regarding the use of scarlet red, that it was an intense stimulant to epithelial proliferation, and in at least one case in his experience it had apparently occasioned malignant degeneration in a benign ulceration and he had learned to employ it with caution.

DR. KINCH said he was willing to accept the diagnosis of scrofuloderma in this case. In answer to a question regarding treatment, he said he would follow, as far as possible, a strictly surgical cleanliness. The lesions had been dressed by him with boric acid dressings kept moist, but later he would clean out the sinus with a curette and then apply a very mild tar ointment.

CASE FOR DIAGNOSIS. MELANO-CARCINOMA OR SARCOMA.
Presented by DR. OCHS.

The patient was a negress, 30 years old. Since her birth she had had a naevus on the outer side of her left foot, on the sole, which had

the appearance of malignancy at the time Dr. Ochs first saw her in the Harlem Hospital. The lesion was about one and one-quarter inches long by three-eighths inches wide, somewhat eroded and very tender; around its edges infiltration could be felt. It bled very easily and had grown in the last 3 weeks both in size and infiltration. The patient remembered a trauma about 4 months ago, where, in walking with a nail projecting in her shoe, it struck the nevus. Since that time not only blood but pus exuded.

Dr. GOTTHEIL said he had seen this case two or three weeks previously, and the black mass had undoubtedly increased in size. He said the case was precisely similar to one shown here some years ago, also located on the foot; a very wide incision was made by a surgeon, but general metastasis promptly occurred, stimulated by the operation, and the patient died a few months later. Immediate amputation very high up was the only measure to be recommended in these very sad cases; but it was very difficult to persuade the patient of the necessity for such a radical procedure when the affection present was apparently of so trivial a nature. It made very little difference whether the growth turned out to be a melano-sarcoma or a melano-carcinoma, though metastasis would be more rapid in the former case.

Dr. MACMURTRY said that Dr. Fox had seen with him a case at the Skin and Cancer Hospital which had a course very similar to the one mentioned, in which the spread of metastasis had been extremely rapid. When the man first came under observation he had several coal black tubercles just below the inner malleolus. Five or six weeks later, when he returned, he had the typical melanotic tubercles which had extended up to his knee. After that, track of him had been lost.

Dr. PISKO said he knew of a case of melano-adenoma in a woman about 22 years of age. It was diagnosed as such and after an excision had been performed she had never developed any malignant new growth. He said he saw her about a year ago.

Dr. MACMURTRY said that about three years previously one of his patients had a large pigmented mole just above the right eyelid. This the speaker had removed with the carbon dioxide snow and the cosmetic result had been absolutely perfect. A short time after this, in looking over the literature he had found a number of references, where cancerous degeneration had resulted following attempts at the removal of such moles, and he asked the gentlemen present whether they ever heard any unfavorable comments on the matter. In the general literature on the subject, the speaker said, it was recommended to leave these lesions absolutely untouched. One writer had attempted the removal of some of these moles for cosmetic purposes and had obtained very disastrous results.

He stated that he had 2 cases in private practice of this same nature, one of which was in a young woman, 22 years of age, whose moles were a great humiliation to her. He said he was doubtful in regard to these cases, although some of his colleagues had strongly advocated the application of the carbon dioxide snow.

Dr. GOTTHEIL, replying to a question as to the use of solid carbon dioxide in this case, said that he regarded it as an inefficient and dangerous procedure, though well suited to the treatment of pigmented naevi that had not begun to undergo malignant degeneration; he had used it many times with good results, and without any of the deleterious effects that were referred to. He insisted, however, that it should be gotten in crystalline solid form, so that it could be cut into any desired shape, and so that any desired amount of pressure could

be exerted. Thorough destructive application was needed in these cases; and that could not be gotten with soft moulded or hammered "snow."

GENERALIZED LICHEN PLANUS. Presented by DR. WEISS.

The patient was a boy, 17 years of age. The disease started when he was 3 months old. It was always generalized over the whole body. He had been under the treatment of eminent dermatologists, and the disease would clear up almost entirely, when relapses would set in, off and on. For the year previous to his presentation he had suffered from itching, sleeplessness and consequent nervousness and malnutrition. The patient presented a general papular eruption, without any of the regular symptoms of eczema papulosum being present. There were no scratchmarks, no crusting, oozing or presence of infected scratches so usual in these generalized cases. There were minute, shiny angular papules all over, and the infiltration of the skin was very marked. The speaker said he believed the case to be either a rare form of a general lichenization of a papular eczema or lichen planus of the general surface. Under daily treatment with oil of cade and baths the condition had greatly improved. A vegetable regimen had also been observed.

DR. MACMURTRY said one of the most interesting features of the case was the marked dryness and scaling of the skin. He said that rubbing and scratching may have caused the production of a secondary lichenoid eczema. He stated that he thought the case was one of chronic lichenoid eczema with an ichthyotic basis.

PSORIASIS OR PITYRIASIS ROSEA? Presented by DR. GOTTHEIL.

This case was shown at the last meeting with a diagnosis of pityriasis rosea; at that time the lesions were hardly elevated at all; what little scaling was present was extremely fine and fatty; a number of the older lesions showed what was apparently a characteristic yellow flattening, and the location on the abdomen, chest and between the shoulder blades completed the picture. One large spot in the right dorso-lumbar region was apparently a characteristic "mother spot." Since that time the patient had been under observation, and the lesions had gradually assumed a more and more psoriasis-like aspect. They had become raised, darker red in color, the scaling had become more abundant, extension in size and retrogression had not gone on, and the whole picture was that of a guttate psoriasis; a diagnosis which had been made a month before by several members.

Epicrisis, two weeks later. Under a boric acid ointment only the scaling had disappeared, the lesions were retrogressing to the extent that many of them, especially on the chest and between the shoulder blades were represented by a seborrhœa-like stain only. It was a question whether a guttate parapsoriasis rather than psoriasis or seborrhœa was the diagnosis. The case illustrated the difficulty in arriving at a conclusion in certain

eases save by prolonged observation, and the reasons for differences in diagnosis in cases seen only once, and possibly under disadvantageous circumstances.

ACUTE SECONDARY SYPHILIS. RESULT OF TREATMENT.

Presented by Dr. KINCII.

The case shown was a youth, who had been presented at the March meeting of the Society. At that time the eruption, generally distributed over the body, was of an active, papulo-squamous character. Large flat condylomata were about the anus and the site of the initial lesion was probably within the rectum. At the last presentation the lesions had almost entirely disappeared, and the speaker brought the case before the attention of the Society to exhibit the good results obtained from five intra-muscular injections of $1\frac{1}{3}$ grains of metallic mercury rubbed up with cocoa butter.

ULCERATING GUMMA OF THE PENIS. Presented by Dr. OCHS.

The patient was a male negro, aged 29, presenting a large ulcerating penile gumma, originally the size of a large walnut, which was healing fairly well under the mixed treatment. The Wassermann in this case had been negative. Seven years previous to his presentation to the Society he had his initial lesion, but as these multiplied, he was told they were chancroids, and up to the time he was shown he had had but little treatment.

ZOSTER PECTORALIS. Presented by Dr. PISKO.

The patient was a male adult who had extensive lesions of zoster pectoralis over the right side of the back, under the axillæ and over the chest. These lesions had a tendency to become gangrenous.

ENORMOUS GUMMATOUS TUMOR OF MUSCLE AND SUBCUTIS. Presented by Dr. GOTTHEIL.

Catherine McC., 49, showed deformity and adhesions of the soft palate, absence of the uvula, and various characteristic tertiary scars of the skin. She was treated for gummatous ulceration of the throat and palate in Lebanon Hospital two years ago. Since that time she had been well, until two months previously, the lump appeared on her leg, and grew steadily ever since. It discommoded her by its size, and it was spontaneously painful, especially during the night. On the upper anterior aspect of the right thigh was a very large tumor, sharply circumscribed, freely movable under the skin, not attached to the femur, moderately hard and a little tender. It was 12 inches across its surface each way, and formed a large globular mass projecting from the anterior inner and upper sur-

face of the thigh. In one place the skin was a little reddened, and here there was a distinct softening of the mass. The only other diagnosis in question was that of sarcoma; this could be rejected on account of the age of the patient, the rapid growth of the tumor, the absence of any connection with the bone or skin, the softening, the nocturnal pain, and the history and evidences of past malignant syphilis. The patient, the speaker said, should have vigorous anti-luetic treatment, salvarsan and mercury at once, accompanied by an effective iodine medication. Under the circumstances, a serum examination was of little importance.

Dr. MacMURTRY said he had examined very extensive cases of gumma, but could scarcely conceive a case of that size, where the tumor was due to a gumma, because one of the characteristics of a gumma was a periarteritis of the arteries supplying the tissues involved, which resulted in a lack of blood supply to the infiltrated area and a consequent central necrosis and crateriform ulceration. To produce a gumma of that size there would have to be enormous areas which would receive no blood. The speaker said if this were a gumma there would be a very marked fluctuation, and certainly there would be a breaking down and ulceration of at least a part of the tumor mass. He said the tumor impressed him as being a very well nourished one, in which the blood supply was almost as good as that of a sarcoma, and that he was inclined to doubt the diagnosis of gumma but would make a diagnosis of sarcoma.

MALIGNANT SYPHILIS. Presented by Dr. Ochs.

The patient was a negress, aged 15, who had received seven salvarsan injections and several intramuscular injections at the City Hospital. She had been dismissed from the hospital entirely free of cutaneous eruption one week previous to her presentation. When she came to the Harlem Dispensary she had a number of vesicles on the left shoulder, some macules and pustules all over the back, legs and face. The inguinal and other glands were involved. Many of the lesions on the back were of the rupial variety. The interesting feature in this case was the relapse after salvarsan and intramuscular injections of mercury.

PAPULO-SQUAMOUS SECONDARY SYPHILODERM. Presented by Dr. Pisko.

The patient, a male, 40 years of age, had a generalized eruption of the secondary papulo-squamous syphiloderm with very marked pigmentation. His father was a Scotchman and his mother a Cherokee Indian. The lesions were first noticed by the patient on the Thanksgiving previous to his presentation to the Society. The speaker said he could not find the initial lesion. There were extensive lesions over the face and forehead. There also were quite large rhagades at both angles of the mouth. All the lesions had a tendency to circinate arrangement of the papules, and were all clear in their centres. The patient also presented enlarged post-auricular cervical glands.

MULTIPLE ABSCESSSES CAUSED BY MORPHINE INJECTIONS. Presented by Dr. Ochs.

The patient was a male negro. He came to the Harlem Hospital Dispensary with a number of miliary abscesses on the arms, forearms and back, in regions which he could easily reach with the hypodermic syringe. He had been addicted to the use of morphine and opium for many years, and used to smoke it, but had been told to put a stop to it on account of his heart. Later on he started to use the hypodermic needle. As this caused him a great deal of pain he started to take tablets, taking as much as 20 grains of morphine a day. At the time of presentation he said he was taking about 2 grains a day. All of the lesions had been abscesses and some had the characteristics of gummata, but yielded to wet borie acid dressings. Nothing but the scars of the abscesses were to be seen.

SARCOMA CUTIS KAPOSI OF 20 YEARS' DURATION, DEVELOPING INTO ORDINARY SARCOMA OF THE SKIN. Presented by Dr. GOTTHEIL.

This patient had been presented several times to the Society, once ten years ago, and once a year ago. During all this time he presented the characteristic lesions of a pigmented sarcoma as described by Kaposi; the subcutaneous purplish tumors and flat induration of the legs, feet and hands, the pigmentations, and the atrophies from retrograded lesions. There had been practically no advance in the disease in all these years; many tumors, in fact, had disappeared and the patient presented fewer and less extensive lesions in this special respect than he did ten years ago. From time to time he had been under an intensive course of arsenical treatment, which always did him good; the pain and disability in walking got less, and many tumors and indurations retrogressed. Two months ago, however, and for the first time, a mass appeared on the skin of his right calf. This was purplish in color and horny on the surface. It had been growing slowly, so that at the time of presentation it was three by two inches in size. It was a moderately hard, purplish and slightly tender tumor mass with a markedly verrucous surface. Ulceration had not yet occurred. Dr. Gottheil regarded the case as a final invasion of the skin by the sareoid or sarcomatous process, and a rapidly unfavorable course could be expected, he said, from that time on. Operative interference, the speaker stated, was absolutely rejected.

LICHEN RUBER. Presented by Dr. Pisko.

The patient, a colored boy aged 12 years, gave a very poor history of his eruption. He said he thought the lesions had been there only for 10 or 12 weeks. The lesions were seen on the feet, fingers, knees, thighs and buttocks. The lichen ruber condition was very well defined, especially on the back of the neck and in the sacral region.

CARCINOMA LENTICULARE OF THE INGUINAL REGION.

Presented by DR. OULMANN.

The patient, a male adult, 56 years of age, had been seen by the speaker for the first time on the day of presentation. The patient had noticed the lesions about three months previously and since that time complained of more frequent micturition. The right leg was almost twice the size of the left one, caused by stasis. There were no large tumor masses to be felt in the skin or abdomen. In both inguinal regions, more on the right than on the left, there were numerous hard, red nodules, of lentil size, extending over the skin. Carcinomatous metastases were frequent on the chest and back. In this case the primary tumor was a carcinoma of the prostate, which was proven the next day.

EPITHELIOMA OF THE HAND. Presented by DR. HOWARD FOX.

The patient, a male adult, came from the German Hospital and presented a number of lesions which looked like a possible blastomycosis. The man had been bitten by a horse two years previously to his presentation, at the middle of the back of the hand. Since then the lesion spread in a serpiginous manner. When seen one month before, there was a great deal of œdema present, which had gone down under wet dressings. Dr. Fox said he thought this a most unusual location and a very interesting picture of epithelioma and that he would make a complete report of the case after further study.

DR. OULMANN said he had seen the case a few months previously, when he entered the German Hospital. At that time the hand was much more swollen and showed a number of smaller ulcerations discharging pus. The speaker, when he saw the case first, made a diagnosis of blastomycosis, but the microscopical examination proved it without doubt to be an epithelioma. He said he remembered having seen only one case of epithelioma of the hand, which was a case of X-ray epithelioma and dermatitis.

DR. GOTTHEIL said that if this lesion was an epithelioma, as seemed to have been demonstrated satisfactorily to the exhibitor by the microscope, then it simply illustrated the impossibility, in certain cases, at least, of making any diagnosis by inspection. The lesion presented none of the ear-marks of cancer, even at its margins; on the other hand it showed clinical signs of a blastomycosis or a tuberculosis. Either one of these conditions should have been evident on careful and painstaking microscopic examination, yet they were not found present.

SPECIMEN OF HAIR SHOWING FRAGILITAS CRINIUM.

Presented by DR. OCHS.

Dr. Ochs showed a specimen of hair of a lady, 30 years of age, who complained that her hair was splitting. There were nine different fragments or splittings. The case was one of fragilitas crinium. Most patients, the speaker said, who were affected with this condition, usually had a dry scalp, while this woman's was very greasy.

REVIEW
OF
DERMATOLOGY AND SYPHILIS.

Under the direction of

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DERMATOLOGISCHE WOCHENSCHRIFT.

(May 17, 1913, lvi, No. 20.)

Abstracted by CHAS. GOOSMANN, M.D.

STUDIES ON THE SUBJECT OF IMPROVING THE WASSERMANN REACTION, PARTICULARLY WITH REGARD TO THE SO-CALLED "PARADOXIC SERA." FR. GRAETZ, p. 557.

Graetz believes the original Wassermann technique is still the best, although further experiment is needed to make it more certain in diagnosis and uniform in results. A brief review is given of various suggested modifications of the original technique. (*To be continued.*)

A FATALITY FROM SALVARSAN. ARTHUR JORDAN. p. 567.

Jordan reports a death from acute encephalitis, four days after an injection of 0.55 gm. salvarsan. The syphilitic infection had occurred 9 years before, and had been treated irregularly with mercury. A salvarsan injection, 17 months before the fatal one, had caused no dangerous symptoms. At no time, even after the last injection, were there any abnormal constituents in the urine.

(*Ibidem*, May 24, 1913, lvi, No. 21.)

THE USE OF MASTIC SOLUTION IN DERMATOLOGY. F. HAMMER, p. 581.

A solution of mastic in benzol, with the addition of a small amount of turpentine, is used by Hammer as a protective coating instead of collodion, over which it possesses the advantages of greater adhesiveness and less contractility. Painted on the border of ulcers, it protects the new epithelial growth from

maceration. In a similar manner, it acts beneficially in chancreoid, to prevent the spreading of the ulcer. Decubitus is treated by a liberal application of mastic solution around the ulcer, and zinc salve on gauze applied to the denuded area, the gauze being held in position by adhesion to the mastic. In unyielding cases of rhagades of the mouth, a small piece of gauze is retained in position by the same adhesive power. Surprisingly good results have been observed in lupus from the application of the mastic solution, containing 10% pyrogallol, and covered with a layer of gauze.

STUDIES ON THE SUBJECT OF IMPROVING THE WASSERMANN REACTION, PARTICULARLY WITH REGARD TO THE SO-CALLED "PARADOXIC SERA." FR. GRAETZ, p. 584. (*Continued.*)

The first step adopted by Graetz in improving the Wassermann reaction, consisted in absorbing the normal amboceptor of human serum by contact with sheep corpuscles. By this means he was able to increase his positive reactions to the extent of 6% in one group and 15% in another. (*To be continued.*)

(*Ibidem*, May 31, 1913, lvi, No. 22.)

LIPIODIN IN SYPHILIS. ALFRED ROTH, p. 614.

Since the advent of salvarsan, the use of the iodine preparations has been, to some extent, neglected, in spite of its acknowledged usefulness in certain cases of syphilis. To diminish the frequency of iodism, numerous organic iodine compounds have been used. These can be divided into two chief groups: albumin compounds, and those made from fatty acids. The albuminate group has been shown, in part, to have an action entirely analogous to the inorganic salts, while the remainder either contain but a small percentage of iodine, or else they contain an added quantity of inorganic salts.

The combinations of iodine with the fatty acids can be divided into three types: 1. Iodine combined with fatty acids and their esters; 2. Combined with fatty acid esters, only; 3. Combined with soaps of the fatty acids. Examples of the first type are iodostarin and iodipin; of the second type, lipiodin; while sajodin is of the third type.

Organic iodine compounds are more lipotropic and neurotropic than the inorganic. Investigations of Loeb and von den Velden have shown that in fatty acid combinations (type 1) the iodine action is of brief duration, while in soap combinations (type 3) it is too prolonged, and therefore hard to control. Lipiodin, made by the "Gesellschaft für Chemische Industrie" in Basel, is the ethyl-ester of diiodobrassicic acid, with an iodine content of 41.06%, and therapeutically occupies a middle position between those of type 1 and 3. It is a crystalline substance, and has good keeping qualities.

Roth has treated 18 cases of syphilis, 4 of which are reported; one of 4 months' duration with severe cephalalgia, the other 3 having gummata. Iodism, beyond a slight coryza, did not occur, although two of the cases had shown a susceptibility to potassium iodide. The dose of lipiodin is two to four 5 grain tablets daily, after meals, a relatively small amount as compared with the potassium salt, but it has been shown that only 15 to 20% of the latter is utilized by the body, on account of the rapid absorption and equally rapid excretion.

STUDIES ON THE SUBJECT OF IMPROVING THE WASSERMANN REACTION, PARTICULARLY WITH REGARD TO THE SO-CALLED "PARADOXIC SERA." FR. GRAETZ, p. 616. (*Concluded.*)

The occurrence of "paradoxical sera" is disputed, although it is admitted that there are "paradoxical reactions," due to inaccuracy of the present technique.

Sera from proved non-syphilitic cases never yield paradoxical reactions, once negative and the next time positive; but the sera from syphilitics, especially such as are not strongly positive, (and perhaps show late hæmolysis), may give rise to a paradoxical reaction. To prevent paradoxical reactions the various factors entering into hæmolysis would have to be made less changeable. Complement is known to vary a good deal, and requires titration for each sample. And the normal anti-sheep amboceptor of human serum should be absorbed as mentioned.

(*Ibidem*, June 7, 1913, lvi, No. 23.)

PRACTICAL OBSERVATIONS ON THE DIAGNOSIS OF CUTANEOUS MANIFESTATIONS OF PELLAGRA. GUIDO VON PROBITZER, p. 637.

Von Probitzer emphasizes the statement of Lombroso that the pigmentation and desquamation of the skin are not the most important symptoms of pellagra. The absence of erythema does not exclude a diagnosis of pellagra, if the other symptoms are present. It has been suggested that cases having mild alimentary symptoms without skin manifestations, be called pre-pellagrous.

The differential diagnosis of pellagra-like erythemas is still difficult, and von Probitzer suggests the advisability of histologic study of uncertain cases. In the erythema of pellagra, the important changes are œdema of the derma and epidermis, degeneration of the collagen, and the relative absence of leucocytes. Such terms as pseudopellagra, pellagroid erythema, and hybrid erythema are condemned, until histologic study has shown a definite reason for their acceptance. The possibility that alcoholism alone may produce an erythema or alter the character of pellagrous erythema is impressed by a detailed case report.

(*Ibidem*, June 14, 1913, lvi, No. 24.)

A CONTRIBUTION TO THE STUDY OF ALOPECIA NEUROTICA. HANS ROCK, p. 662.

Rock gives a very complete list of reported cases in which alopecia seemed due to nerve derangement. Following Joseph's classification, he divides the cases into three groups: 1. Cases following trauma to the cerebrum and the peripheral nerves. 2. Following non-traumatic disease of the nervous system, as chorea, neuralgia, etc. 3. Following mental disturbances, fright, etc. Alopecia neurotica differs clinically from alopecia areata, in the absence of a well developed type, the presence of lanugo hair, and the not infrequent change in color of the otherwise normal hair.

A case is reported in detail, of a motorman, who, following a collision in which he was practically untouched, developed alopecia of the scalp, eyebrows, face and body. The axillary and pubic hair was thinned and easily epilated. The condition still persisted after 5 months.

(*Ibidem*, June 21, 1913, lvi, No. 25.)

A CASE OF SYPHILIS OF THE PROSTATE. MAX HESS, p. 685.

Beside discussing the few reported cases of syphilis of the prostate, Hesse describes one new case. Nine years after infection, there developed difficulty in urination, rapidly increasing, so that in 14 days there was severe strangury, and on some nights he had to urinate 30 or 40 times. There was neither history nor clinical evidence of gonorrhœa. The entire prostate was larger and harder than normal, but the right and middle lobes were more involved. In the right lobe there was also a distinct swelling, about as large as a hazelnut. Tenderness was not marked, and the expressed secretion was normal except for a few leucocytes. Treatment consisted in injections of asurol and two doses of sal-

varsan, with complete relief of symptoms and subsidence of the prostatic swelling. Several hours after the second salvarsan injection, (8th day), there was temporary recrudescence of strangury, repeated in milder form after the next asuro injection (9th day). Hesse explains this recrudescence as due to reaction in blood vessels previously damaged by the syphilis, and not as a Herxheimer reaction, which ought to follow immediately the beginning of treatment.

(*Ibidem*, June 5, 1913, lvii, No. 27.)

ON THE RELATION OF SKIN DISEASES TO INTERNAL SECRETIONS. FRANZ V. POOR, p. 779.

After a general discussion of hormone action, by which the secretion of one organ may stimulate, depress, or otherwise change the secretion of another organ, v. Poor inquires into the possibility of faulty internal secretions causing skin diseases. The well known dependence of Addison's disease and myxœdema upon faulty internal secretions, should lead to further study, not only of the thyroid and adrenals, but also the pancreas and hypophysis. Cutaneous changes have been reported in association with exophthalmic goitre, acromegalie, and dystrophia adiposa-genitalis. With exophthalmic goitre there has been reported pigmentation, vitiligo, urticaria, erythema, alopecia, hyperidrosis and scleroderma.

The cutaneous picture of myxœdema is analogous to that of senile atrophy, as well as to the early stage of xeroderma pigmentosum. Histologically, all of these show swelling of the elastic fibres, with atrophy, hyaline degeneration or disappearance of the collagen fibres. The occurrence of xeroderma pigmentosum on the exposed parts of the body does not exclude the internal secretions as a possible cause, for Wedding has shown that cattle and sheep fed on buckwheat, develop an eruption when given prolonged exposure to sunlight, while on other diets this does not develop. Similarly, v. Poor believes, a faulty internal secretion may be the predisposing cause of xeroderma, while light acts as the exciting cause.

Diffuse scleroderma has often been found associated with exophthalmic goitre and even when unaccompanied by any symptoms of Basedow's disease, the thyroid has been found abnormal, usually showing connective tissue overgrowth, and atrophy of the parenchyma. (*To be continued.*)

(*Ibidem*, July 12, 1913, lvii, No. 28.)

A RARE FORM OF PAPILLARY ACANTHOMA ON A LUETIC BASIS. ANT. TRYB, p. 819.

Tryb describes with great detail a case of syphilis of the lip, associated with an abundant papillary overgrowth. The condition was of eleven years' duration, and started nine years after infection. The lip presented an elephantiasis-like thickening, nodular and furrowed. At one place, on the vermilion border, there were thick crusts, under which were found closely set, filiform papillæ.

Histologic examination showed typical syphilitic changes of the blood vessels, with abundance of plasma cells. The filiform papillæ showed marked acanthosis. Salvarsan and other antisyphilitic treatment caused a gradual improvement in everything except the acanthosis, which continued to extend, and required excision. Tryb considers the acanthosis non-specific, and analogous to acuminate condylomata.

ON THE RELATION OF SKIN DISEASES TO INTERNAL SECRETIONS. FRANZ V. POOR, p. 826. (*Concluded.*)

Animal pigment is an oxidation product of albumin molecules or their derivatives (tyrosin, etc.). To explain the pigmentation of Addison's disease, Adami

considers it the normal function of the adrenals to convert tyrosin and its derivatives into adrenalin. If this function is impaired, the tyrosin can accumulate in the tissues, and be oxidized in the skin to melanotic pigment. This, however, does not explain the other forms of pigmentation, such as *acanthosis nigricans*, *sypilis pigmentosa*, etc., in which the adrenals are entirely normal. Here some other internal secretion may be at fault, or it may be the toxic substances liberated by cancer cells in the one case, and by the *treponemata* in the other.

DEUTSCHE MEDIZINISCHE WOCHENSCHRIFT.

(Sept. 4, 1913, xxix, No. 36.)

Abstracted by CLARENCE ALLEN BAER, M.D.

MEDICAL COSMETICS OF THE SKIN. KROMAYER, p. 1713.

The author gives a review of methods of treating certain conditions of the skin. He considers in particular the thickenings of the skin, blood vessel anomalies, diseases of the sebaceous glands, tumors, such as warts, *nævi*, scars, etc., and diseases of the hair.

THE METAMORPHOSIS OF PRIMARY SKIN LESIONS. KARL HERXHEIMER, p. 1725.

The author considers the formation of lichenoid papules from other primary lesions. This occurs in various skin diseases in which the primary lesion is always a vesicle or pustule. Many authors consider that a lichenoid papule is formed from a pustule. The author has watched this particularly and from 1910 to 1913 has observed 14 cases. These were observed in cases of syphilis. The author considers this a true metamorphosis and not the appearance of primary lesions.

Thirteen cases of dermatitis herpetiformis were studied. Lichenoid papules arose from vesicles and in none of these cases was a lichenoid papule ever seen as a primary lesion.

This is also true in herpes progenitalis. If herpes vesicles do not disappear soon after their appearance, metamorphosis is very often seen. This was observed also in one case of herpes perianalis. This metamorphosis can also take place in varicella. The author observed distinctly in two cases the change from pustules to lichenoid papules. In cases of eczema this was also seen.

The mechanism of the metamorphosis is simple and occurs as follows: The vesicles or pustules dry and form a crust which is thrown off from the centre towards the periphery. The central loosening extends peripherally rapidly, so that in many cases it can hardly be observed. Usually only the peripheral loosening of the crust is seen and since there is no longer any pus content, appears as a whitish scaly lesion. Finally, this crust also disappears and the lichenoid nodule is produced. Very often a centrally shiny spot is seen before the peripheral border of the crust has been loosened.

This clinical picture is corroborated by the histological finding.

This phenomenon of metamorphosis is explained as follows: The body tries to overcome an acute inflammation very rapidly and in case this should not occur, the metamorphosis takes place in order to eliminate the acute inflammation, and produces in its place a chronic inflammation of some kind.

Wherever the lichenoid papules were examined, there was always a lymphocytic infiltration present. The polymorphous appearance of dermatitis herpetiformis

can be explained along these same lines—the original lesion is a vesicle and the subsequent lesions are formed by the confluence of the vesicles, the infection of the vesicles, or by the appearance of chemical substances at the site of the lesion brought there by the blood and producing the papule formation.

We must, therefore, be careful to differentiate between primary lichenoid papules, and those produced secondarily.

THE VALUE OF GOLD-POTASSIUM CYANIDE IN THE TREATMENT OF LUPUS VULGARIS AND ERYTHEMATOSUS. A. RUETE, p. 1727.

The favorable report made in January by Bruck and Glück on the intravenous infusion of gold-potassium cyanide in tuberculosis and syphilis stimulated the author to try similar experiments. Unfortunately, he could not verify the results of Bruck and Glück. Fifteen cases of various forms of lupus were treated; 2 cases of lupus erythematosus were also treated. All cases except 2 took the infusions without any fever or other general reactions. Two cases, one of disseminated lupus erythematosus and the other of lupus vulgaris of the cheek complained of local pain at the point of injection and fever. One patient, about 10 days after the second injection, suddenly was taken with a severe bleeding in the left arm into which the intravenous injection had been made and his entire arm became black and swollen. Fear of thrombosis caused the author to discontinue treatment.

Twice a week, intravenous injection of the gold-potassium cyanide was given, beginning with 0.02 gram and increasing to 0.05 gram; 24 to 48 hours before the infusion, the tuberculin injection was given, beginning with $\frac{1}{100}$ of a milligram and increasing to $\frac{1}{2}$ of a milligram; 12 infusions were given as a series.

Detailed histories of the patients are given.

In conclusion, Ruete states that the combined treatment with gold-potassium-cyanide and tuberculin according to the method of Bruck and Glück gave very slight, if any, beneficial results in 5 cases. In 2 cases after treatment, lupus nodules were found intact by histological examination. One case of disseminated lupus erythematosus that previously had been treated with tuberculin alone and had invariably shown reaction, showed great improvement with this combined treatment. An ordinary case of lupus erythematosus remained unaffected.

EXPERIENCE WITH EMBARIN. M. SALOMONSKI, p. 1733.

Embarin is a new mercury preparation that is soluble in water. It is manufactured by Heyden.

The author reports 32 cases—5 chancres, 23 secondaries and 4 tertiaries. Instead of using 15 injections, given one every other day, as recommended by Loeb, the author gave 20 daily injections. The effect of the mercury on the gums was never apparent until towards the end of the series, and then never enough to cause abandonment of the injections.

In 5 cases there was a very profound general constitutional effect produced after the first injection, such as fever, vomiting, diarrhoea, headache, vertigo, irregular pulse. These 5 patients, however, upon their own requests, received further injections with the preparation. Of 15 cases that could be followed with a Wassermann reaction, 7 gave a positive reaction before the treatment, 15 gave a negative reaction after the treatment.

Of 27 cases one month after the end of the series, 2 gave negative Wassermann reactions; 2 months after the end of the series, 1 negative; three months after, 3 negative; 5 months after, 3 negative.

The other cases were not available for examination.

Of the 5 chancre patients, one exhibited an idiosyncrasy against the drug and

the treatment could not be carried out as thoroughly as in the other 4. The search for spirochætae in the 4 was negative.

The effect of the embarin on the syphilitic lesions was as follows: During the first week of treatment there was very little change, but after that, the symptoms were very much improved. In one case of syphilitic papular eruption, after 20 injections in 29 days, the effect was very slight, but during the following week, without any further treatment, the condition became much improved.

Bad effects of the embarin on the kidneys could not be demonstrated.

The author concludes that in spite of the 5 cases of idiosyncrasy, which made about $\frac{1}{6}$ of the number of patients treated, embarin has made a favorable impression.

(*Ibidem*, Sept. 11, 1913, xxxix, No. 37.)

THE RELATIONSHIP OF SYPHILIS EXPERIMENTALLY PRODUCED IN ANIMALS, TO HUMAN SYPHILIS. A. BUSCHKE, p. 1783.

The author reports in detail a case of an assistant in the laboratory, who was pricked in the finger with a needle that was infected with material taken from the testicle of a rabbit. At the point of the prick a typical chancre developed and the patient subsequently passed through the typical secondary stages of syphilis.

Buschke concludes that, first, the syphilitic infection produced in the rabbit, in spite of the clinical and biological differences, is really syphilis. This is demonstrated by his case for the first time. Second, the contagion of syphilis, in spite of the many transferences of the spirochætae from rabbit to rabbit, still retains its full virulence for man. Third, the possibility of producing a vaccine against syphilis by the passing of the spirochætae through the animals, seems doubtful.

Buschke objects emphatically to the vigorous suppression of syphilis in the very early stage by means of salvarsan or combination of mercury and salvarsan, because this method is not absolutely abortive, at least not as yet, but is liable to produce subsequent serious troubles by the appearance of a negative Wassermann resulting in the overconfidence of the patient.

THE RARIETY AND PECULIAR CLINICAL FORMS OF VARICELLA IN ADULTS. E. SAVINI, p. 1791.

Previously a few cases of varicella in adults have been reported. Krause reported 4, Lentz reported 1, and Lilienthal reported 6. Savini now wishes to draw attention to a previous article of his that appeared in 1911, in which he reported 2 cases of varicella in adults. The peculiar manifestations of the disease were the long duration (10 days), the long period of invasion, the severe manifestations in the nervous system and digestive apparatuses, during the disease. On the other hand, the period of eruption was short and the picture of the entire disease much milder in two children of one of the adult patients—the three being ill at the same time.

Upon a study of the literature of the subject, Savini concludes that young women are more frequently affected with varicella than young men.

(*Ibidem*, Sept. 25, 1913, xxxix, No. 39.)

CONCERNING THE HERMAN-PERUTZSCHE SYPHILIS REACTION. JOSEF KALLIOS, p. 1885.

In doing the Herman-Perutz'sche reaction in syphilis, an alcoholic cholesterolin suspension and a 2 per cent, aqueous sodium glycocholate solution are used; the reagents, plus the syphilitic serum give a plum colored precipitate.

In 63 cases that were not aware of any syphilitic infection, there was a negative reaction in 60. In one of the so-called non-syphilitic cases that gave a positive reaction, the Wassermann reaction was also strongly positive. After 30 mercury inunctions, the reaction became negative. In the second case of the three, the patient had had a chancre and the glands in the groin were enlarged. The Wassermann reaction was negative. The third of the cases had no history of any sort of a chancre, had two healthy children and had tuberculosis of the larynx. The Wassermann reaction was negative. In another case of tuberculosis, the Herman-Perutz'sche reaction was also positive. In 132 known syphilitic cases, the Herman-Perutz'sche reaction was positive in 66.6 per cent, while the Wassermann reaction was positive in 65.1 per cent.

The author concludes that the Herman-Perutz'sche reaction is a specific one for syphilis. In non-inactivated sera, the reaction is much more pronounced. In primary syphilis, the reaction appears much more rapidly than does the Wassermann reaction. The Wassermann reaction cannot, however, be replaced by it, because in secondary syphilis the Herman-Perutz'sche reaction is less often positive than the other reaction. As a control for the Wassermann reaction, however, the Herman-Perutz'sche reaction is of great value.

PHENOL-CAMPHOR IN CHANCROID. FR. HOROWITZ, p. 1886.

An article on the therapeutic uses of phenol-camphor.

ZEITSCHRIFT FÜR KINDERHEILKUNDE.

(May 15, 1913, vii, Nos. 5 and 6.)

Abstracted by HARVEY PARKER TOWLE, M.D.

THE OUTCOME OF 396 CASES OF CONGENITAL SYPHILIS AND THE NECESSITY OF SYSTEMATIC METHODS OF CARING FOR THESE CASES. ERNST WELDE, p. 451.

From 1902 to 1910, inclusive, 100 cases of congenital syphilis were treated in the wards of the Berlin Charity Hospital and 296 cases in the polyclinic. As the task of tracing the entire 396 cases was impossible, Welde arbitrarily limited his study of end-results to the 100 cases observed during 1902, 1904 and 1908. Even by securing the assistance of the police, Welde could succeed in discovering the addresses of but 68% of the total cases. Of this number, 41% were reported dead, 27% presented themselves for re-examination, 32% made no answer to inquiries.

A second series of investigations included 200 cases, 100 from the hospital and 100 from the polyclinic. The mortality was found to be 74% among the hospital patients and 30% among the cases treated in the polyclinic. These statistics are only valid for the hospital, not for congenital syphilis at large. If it were possible to add the cases in private practice, (as Welde argues, ought to be possible), the mortality percentage would be considerably reduced. The low death rate in the polyclinic, compared to the very high percentage in hospital cases, is explained on the ground that only the severe cases are admitted to the wards. Poverty with its associated ills, poor physical condition and severe infection contributed to produce the high rate of 74% mortality. The 30% mortality among the polyclinic cases was needlessly high, many cases having been brought to the polyclinic but once. If the parents, instead of resting satisfied with learning the diagnosis, had but brought their children for continued treatment, many would undoubtedly have been saved from death.

Welde made an interesting study of the relation to prognosis of the time

of the first manifestations of syphilis. He reports that 35% died, of those who presented symptoms at birth, 42% of those first showing signs during the earlier weeks of life, while, of those who were six months of age or over, before showing evidences of syphilis, only 1% had died.

A fourth table shows the value of breast milk very graphically. Only 20% of the breast fed infants died. The mortality of the artificially fed infants was 42%. The beneficial influence of human milk feedings is especially well illustrated by the lower mortality of 31% among those infants who had received breast milk, for even a short time.

Welde presents a table to illustrate the effect of treatment, from which he draws several conclusions. These figures seem to show that the mortality depends less upon the drug or the method, than upon the energy with which the treatment is pursued. It was found that the highest death rate was in the cases which had received the least treatment. In seeking for greater understanding of this fact, Welde discovered that while, in the hospital, it was the severest cases which had received the least treatment, the contrary was true of the polyclinic. In the hospital, the severity of the infection and the low vitality caused death before it was possible to give adequate treatment, regardless of methods. In the polyclinic, the very mildness of the cases induced neglect. It is a matter of record, Welde reports, that of the 296 polyclinic cases, 114 never made a second visit. He ventures the assertion that one-half of these cases, if living, are still syphilitic.

Thirty-six patients were examined for cure, and for the persistence of the disease. As evidence of cure, Welde insisted that the patient should exhibit neither visible signs nor react positively to the Wassermann test. He found 27 still syphilitic; 9 he accepted as cured. In answer to the objection that the Wassermann reaction does not furnish indisputable proof of cure and furthermore that it is notoriously slow in disappearing in congenital syphilis, even after abundant treatment, Welde admits the facts but argues that so long as we cannot explain the reaction, it is best to accept a positive result as an indication of the presence of syphilis. Although but 9 cases of cure were found, nevertheless, even this small number is sufficient to demonstrate that cure is not impossible.

Welde's final conclusion is, that everything proves the need of official supervision of every case of congenital syphilis, both in public and private practice.

(*Ibidem*, May 26, 1913, viii, No. 1.)

THE DIETETIC TREATMENT OF ECZEMA IN INFANCY AND CHILDHOOD. H. FINKELSTEIN, p. 114.

In this article Finkelstein reports and comments on 8 cases of various types of eczema. The writer draws no general conclusions but the impression which he leaves upon the reader's mind is that it is hopeless to expect any one form of dietetics to be adapted to all cases. In one case abundant feeding gives results. In a second, a restricted diet succeeds. In a third case no diet is successful. The inference is, of course, that the general condition of the patient is the important fact in determining the diet to be given, not the diagnosis of the cutaneous disease.

(*Ibidem* June 5, 1913, viii, No. 2.)

THE DUNGERN REACTION IN CONGENITAL SYPHILIS. S. SAMELSON, p. 155.

(*Continued from April 24, 1913.*)

The Dungere reaction consists essentially of a simplification of the Noguchi method. It was devised to supply a test which does not require a special training beyond the powers of the average physician. Measured amounts of the proper

reagents are dried upon paper, in which form they are furnished to the physician. All that the physician is called upon to do is to obtain a few drops of blood from the suspected patient and then to use the reagent papers according to directions accompanying them.

In 36 cases, Samelson has compared the reaction obtained by the Dungere method with the Wassermann reaction. He concludes from the comparison that the Dungere method is sufficiently accurate for clinical purposes.

LA CLINIQUE INFANTILE.

(June 1, 1913, xi, No. 11.)

Abstracted by HARVEY PARKER TOWLE, M.D.

THE MORTALITY OF MEASLES IN THE HOSPITALS OF PARIS.

(Abstract from *Le Matin*), Louis Martin, p. 341.

In this abstract of an interview with M. Martin, a number of very striking statements occur. The interview begins with the assertion that for 25 years measles has caused more deaths than diphtheria. In the hospitals of Paris, the mortality varies between 15% and 20%. Of all the diseases of notification, measles holds the first place. It is, however, to be remembered that measles, per se, is benign. A high death rate therefore usually indicates such complications as poor nourishment, infancy or over-crowded wards.

(*Ibidem*, June 13, 1913, xi, No. 12.)

PHTHIRIASIS OF THE SCALP WITH INFECTION. THERAPEUTIQUE INFANTILE, p. 384.

The following advice to subscribers, quoted from *Le progres medical*, may have a certain interest for dermatologists. It is said that the hair should be cut short. Then, for a night, the scalp should be smeared with vaseline to asphyxiate the parasites and to soften the crusts. The next day the vaseline is to be washed out with soap or with "bois de Panama." After which some form of antiseptic treatment is to be prescribed. A sample of the prescriptions printed is dermatol 2 gm., vaseline 30 gm. When the irritation has been sufficiently calmed by the antiseptic remedies, xylol is to be used in strength of 50 parts with a combination of alcohol and ether, of each 25 parts.

ARCHIVES OF PEDIATRICS.

(August, 1913, xxx, No. 9.)

Abstracted by HARVEY PARKER TOWLE, M.D.

THE TREATMENT OF TUBERCULOUS ADENITIS. JOHN H. JOHNSON, p. 564.

An argument on the superiority of surgical intervention. With the single exception of tuberculin, the writer refers scornfully to all methods of treatment as inferior to surgery. Toward tuberculin, he is more respectful, stating that it is among the possibilities that tuberculin will eventually supersede surgery in these cases.

(*Ibidem*, September, 1913, xxx, No. 9.)

TUBERCULIN SKIN REACTIONS IN INFANCY. ALAN BROWN, p. 665.

In the Babies' Hospital of New York it is the custom to use the tuberculin test in every case of respiratory disease and in all suspected cases. Dr. Brown has used the results obtained in 650 patients under two years of age, as a reliability test of the reaction.

Until three years ago, 25% tuberculin was used for the test. Since that time, pure tuberculin has been employed with greater satisfaction and without accident. Brown recommends the outer surface of the forearm as a favorable site. Placing a drop of tuberculin upon the skin, a control scratch is made at a distance of at least two inches from the drop and then a second scratch directly through it. After the operation, the child's arm is held until the drop has dried thoroughly. Dr. Brown recommends making the scratches not over a quarter inch in length, to avoid setting up more traumatic reaction than is necessary. Otherwise, an artificial element of confusion may be introduced.

Seventeen and a half per cent. (114) of the total number tested reacted positively. Of these it had been possible to demonstrate tuberculosis conclusively, either by autopsy or by the bacilli, in 79 cases (70%).

Of the cases which had given a negative reaction to tuberculin, 61 came to autopsy. No evidence of tuberculosis was discovered in 60. The one exception occurred in a case of miliary tuberculosis.

Brown's conclusions are that the specific action of the tuberculin test in infants is confirmed; that, if negative, the test should be repeated; that, in infancy, a negative tuberculin test is almost conclusive evidence against the existence of a tuberculous focus, except when the patient is moribund or suffering from measles.

GIORNALE ITALIANO DELLE MALATTIE VENEREE E DELLA PELLE.

(May 10, 1913, liv, No. 2.)

Abstracted by A. RAVOGLI, M.D.

REMARKS ON THE RESULTS OF 1600 WASSERMANN REACTIONS. P. MINASSIAN, p. 159.

The author distributes the results of the Wassermann test in several groups, as follows: various dermatoses; varicose, ulcerating and neurotrophic ulcerations, affections of the eye, venereal diseases, syphilis in different periods, parasyphilis, hemiplegia, individuals suspected of having syphilis, individuals immune from syphilis, treated syphilitics and syphilis maligna præcox. In psoriasis, one patient had a positive Wassermann reaction, but he had had syphilis in the past. In 6 cases of lepra, 3 were positive, 3 negative. In 9 pemphigus cases, one showed a positive Wassermann; in cases of eczema, pompholyx, epithelioma, lupus, etc., the reaction proved negative. In various types of ulcerations, 35% were Wassermann positive. In 25 perforating ulcers, 8 were positive, 2 doubtful. In 9 neurotrophic ulcers, 2 were positive. Of ocular affections, syphilitic iritis always gives a positive reaction; of 8 cases of parenchymatous keratitis, the test was positive in 6, doubtful in one, and negative in one.

Of 41 cases of chancre without perceptible adenitis, 25, that is, 41%, had positive Wassermann reactions. Of 224 cases in the secondary period, 223, or 99% were positive. Of 92 patients having enlarged glands and apparently no other symptoms, 64 were positive, 70%. Of 54 cases without perceptible adenitis,

two years after treatment, 28 were positive, 52%. In the tertiary period, 85 cases were examined, of which 76 were positive, 5 doubtful. Six cases of cerebral syphilis showed 5 positive and one doubtful. Of 21 cases of aortitis and aneurysm, 17 were positive, 2 doubtful. Of 39 tabetics, the reaction was positive in 32, doubtful in 2. Fifteen cases of progressive paralysis showed 12 positive, 2 doubtful. Of hemiplegia, in 11 cases, 9 were positive, 1 doubtful. Of 175 cases suspected of having syphilis, 35 gave a positive reaction. Eighty-three cases free of syphilis were examined, one of whom gave a slightly positive result.

Of patients treated with salvarsan alone, in 50 cases, the reaction was positive in 19, doubtful in 5. Of 35 cases treated with salvarsan and mercury, 4 were positive, 2 doubtful. Of 102 cases treated with mercury alone, 19 were positive, 7 doubtful. The Wassermann results follow:

Cases cured with salvarsan, 38%.

Cases cured with mercury, 18.5%.

Cases cured with mercury and salvarsan, 11.5%.

SYPHILIS, LEPROSY AND PSORIASIS TREATED WITH SALVAR-SAN. A. SERRA, p. 182.

The author reports upon 36 cases of syphilis in different stages, 3 cases of nodular and anæsthetic leprosy and one case of psoriasis. While the results in syphilis were very good, they were negative in the other two diseases.

LEPRA OF THE EYE AND ITS ADNEXA. ACHILLES BREDÁ, p. 214.

After reviewing the history and the literature of leprosy manifestations of the eye, the author reports upon 37 cases of leprosy, who had attended his clinic during a period of several years. He concludes that leprosy manifestations of the eye are frequent, 29 of the 37 being so affected. Age bears no relation to the occurrence of eye lesions. Total blindness is fortunately very rare. The superciliary regions were most frequently affected, and the eyelids, the conjunctiva, the sclera, the iris, etc. The anterior segment is most frequently affected, choroiditis having occurred in but one case. The cornea affected with leprosy has sometimes regained its transparency.

Inoculations of leprosy materials into the lower animals proved negative. As regards treatment, the oil of chaulmoogra seems to have produced the best results. When the cornea is menaced, local and surgical treatment is necessary to preserve vision. The leproma may be curetted or cauterized with the thermocautery.

ON A CASE OF MYCETOMA OF THE CHEEK. A. CARINI, p. 256.

Under the name mycetoma, different affections of man and the lower animals have been described, produced by fungi of different species. In a case of the author's, the patient was suddenly stricken with acute pains in the teeth and showed a scurvy-like condition of the gums. The skin of the left cheek, zygomatic and suborbital region was hard, swollen, of a bluish color, immovable, showing that the muscles and the periosteum were involved. The surface was studded with nodules of the size of a split pea, which, when opened, discharged a bloody serum. Under the microscope, the serum showed the presence of small mycelial filaments, granulations containing small rods, shaped like a club, reminding one of the fungus of actinomycosis. Culture experiments were negative. The patient was cured after three months' treatment with potassium iodide.

THE USE OF CARBONIC ACID SNOW IN SOME DISEASES OF THE SKIN. C. BUA, p. 259.

A good review, otherwise nothing new.

RUSSKI JOURNAL KOJNIKH E VENERICHESKIKH BOLEZNEI.

(May, 1913, xxv, No. 5.)

Abstracted by M. L. RAVITCH, M.D.

A CASE OF PAGET'S DISEASE IN THE VULVA. GRINCHAR, p. 399.

Since Paget, in 1874, described a malignant affection of the nipple and areola, first appearing as an eczematoïd process and later becoming carcinomatous, hundreds of such cases were reported in different journals. Very few cases of extramammary Paget's disease were reported. Up to 1910, according to Hartzell, only 18 cases of extramammary position were reported. Paget's disease is not only found in women but in men as well. Neisser, Pospellow and Crocker reported cases of Paget's on the scrotum: Pick, Tomassoli, Tarnowski and Sequeira on the glans penis; Darier and Cunilland on the scrotum and perineum; Fox and MacLeod on the neck; Winfield on the lip; Jungmann and Pollitzer in the axilla; Ravogli on the nose, and only Dubrenilh, in 1901, reported a case of Paget's in the vulva of a woman, aged 51. Hartzell's case occurred on the forearm, associated with a naëvo-carcinoma. Audry, reporting a case of Paget's developing from a naëvus on the breast, coincides with Hartzell in regard to its pathology.

Grinchar's case was the first one reported in Russia. His patient was a woman, aged 55. She had never had any children. The family history was good. She started to menstruate at 17 years of age, and ceased at 32. In 1909, she developed a pruritus in the genital organs. Soon afterward a papule developed on the lower part of the labii majoris dextri. Shortly several other papules made their appearance. The itching became intense. In two years, a typical, malignant, parchment-like indurated place formed. It soon crusted. On removal of the crust, an indurated, granular and raw appearance was found. Grinchar, like Hartzell and others, is of the opinion that careful microscopical observations would show that cancer in such cases has existed from the outset. Grinchar is also of the opinion that Darier's belief of this disease belonging to psorospermioses is fallacious and he concurs with Unna and others, that these coccidia-like formations are degenerated cells.

Early excision is advocated by the author as the best and the safest remedy.

CASE OF A MAN WITH SUPERNUMERARY NIPPLES. (Papilla accessoria.) SHNITKIND, p. 407.

Shnitkind reports a very interesting case of a man with a supernumerary nipple. The man, aged 29, came for treatment for impotency (post masturbationem) and while examining him, Shnitkind noticed a smaller but well developed nipple under the right one, between the fifth and sixth ribs. He also reports a case of a man with a double nipple—(papilla duplex).

THERAPY OF ERYSIPELAS BY EXTERNAL APPLICATION OF IODINE AND INTERNAL USE OF COLLARGOL. JILANSKI, p. 409.

Jilinski states that the army men in a certain district in Russia suffer a great deal from erysipelas erythematosum, miliare, vesiculosum, bullosum (pemphigoides) and phlegmonosum. In his large experience among the army men, he never found anything more effective in all named forms of erysipelas than ap-

plication of tincture of iodine and the internal administration of a 1% solution of collargol in 15.0 to 30.0 gm. doses. He cites many cases.

(*Ibidem*, February, 1913, xxv, No. 5.)

LEPROSARIUM AT KHOLM KUBANSKOI TERRITORY. KRIKLIV, p. 190.

Krikliiv, in the *Vestnik of General Hygiene* for December, 1912, speaks of the contagious nature of leprosy and concurs with such investigators as Minch, Val and Pettersen. This question has been discussed at the medical conference held in honor of the famous Russian surgeon, Pirogov. The leprosarium at Kholm is modern and up-to-date. The buildings are small and sanitary. Those inmates that are able to do a little farming and gardening are allowed to do so. This leprosarium was established not only for housing and isolating lepers, but especially for rational treatment. The following remedies were used: (1) Ol. gynecardiæ (or ol. chalmograræ) and its preparations; (2) nastine, recommended by Prof. Deycke Pascha. In regard to nastine, no definite conclusion as to its efficacy could be made; while ol. gynecardiæ gave splendid results. Out of 104 patients, 95 were benefited. Of this number, 30 were greatly improved and 19 cured. Twenty seven patients have gained in strength and weight. No lepra bacillus was found in the mouth or nose of the improved patients.

*ARCHIVES OF INTERNAL MEDICINE.

(Sept., 1913, xii, No. 3.)

Abstracted by R. C. JAMESON, M.D.

THE TREATMENT OF SYPHILITIC AFFECTIONS OF THE CENTRAL NERVOUS SYSTEM, WITH ESPECIAL REFERENCE TO THE USE OF INTRASPINOUS INJECTIONS. H. F. SWIFT AND ARTHUR W. M. ELLIS, p. 331.

Swift and Ellis give a most comprehensive and interesting article on this new field of syphilitic treatment. Dilutions of salvarsan and neosalvarsan were too irritating when injected into the spinal canal, contrary to the effects of serum.

Serum of treated cases was found to have an inhibitory action upon the spirochætæ in vitro and also when mixed with agar for culture medium, this effect being most pronounced with the serum drawn shortly after the injection of salvarsan.

Their technique is as follows: 40 cc. of blood is withdrawn one hour after the intravenous injection of salvarsan, allowed to coagulate and then centrifugalized. Twenty-four hours later, 12 cc. of this serum is drawn off and diluted with 18 cc. of normal saline, which is then heated to 56.0° C. for one-half hour. Lumbar puncture is made and fluid withdrawn to 30 mm. cerebrospinal fluid pressure. A 20 cc. syringe is connected with the needle by a 40 cm. tube, the tube is allowed to fill with spinal fluid and then the serum is injected by gravity.

They give detailed reports of a number of cases of tabes so treated, with improvement in all. They consider neosalvarsan inferior to an equal amount of salvarsan and at present are giving in these cases .45 to .5 gm. of salvarsan every two weeks, together with intraspinoous injections, until there is a normal cell count and a negative Wassermann.

ANNALES ET BULLETIN DE LA SOCIÉTÉ ROYALE DES SCIENCES MÉDICALES ET NATURELLES (BRUXELLES).

(July, 1913, lxxi, No. 7.)

Abstracted by R. C. JAMIESON, M.D.

CUTANEOUS REACTION OF LUETIN (NOGUCHI) IN SYPHILIS. M. J. DESNEAUX, p. 178.

Desneaux's article gives his conclusions drawn from the use of luetin in two hundred cases, using Noguchi's luetin and for control the same medium without spirochetes, giving .07 cc. at each injection.

He found an evanescent erythema within twenty-four hours after injection, which disappeared the second day. He classifies the reactions into papular, pustular and latent, the first being a small papule developing a day or two after injection, increasing in size for three or four days and having an adjacent area of infiltration. There are some local subjective symptoms, but a return to normal is usual within ten days. The pustular form is an exaggeration of the papular, the latent form not appearing for ten or fifteen days after injection.

His cases showed no general effects, except a slight elevation of temperature at the beginning of strongly positive reactions. Of one hundred and ninety-eight cases, only twenty-three were positive, these being tertiary syphilis and syphilis of the nervous system (except tabes and general paresis). The negative reactions were in primary, secondary and normal cases, while some of the positive cases had a negative Wassermann.

He concludes that luetin produces a reaction only in syphilis and only in the tertiary stage. He considers it extremely important in visceral syphilis.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

(Jan. 4, 1913, lx, No. 1.)

Abstracted by FRANK E. SIMPSON, M.D.

UNUSUAL EXPOSURE TO LIGHT FOLLOWED BY SEBORRHOEIC KERATOSIS. DOUGLASS W. MONTGOMERY, p. 7.

Montgomery reports the case of a naval officer who suffered from a large number of patches of seborrheic keratosis following unusual exposure to "sun-burn" and "water burn." The treatment consisted of protection from farther insult by a colored—preferably a red—veil and the use of the curette and trichloroacetic acid.

THREE CASES OF FAMILY DYSTROPHY OF THE HAIR AND NAILS. J. S. EISENSTAEDT, p. 27.

Eisenstaedt reports three cases of dystrophy of the hair and nails. Of nine children, three were affected and in tracing the ancestry, cases were found to have occurred for five generations. Photographs of two cases are appended.

(*Ibidem*, Jan. 11, 1913, lx, No. 2.)

DEMONSTRATION OF SPIROCHÆTA PALLIDA IN THE CEREBRO-SPINAL FLUID FROM A PATIENT WITH NERVOUS RELAPSE FOLLOWING THE USE OF SALVARSAN. HENRY J. NICHOLS AND WILLIAM H. HOUGH, p. 108.

The authors record the successful inoculation of the rabbit with spirochæta pallida from the cerebrospinal fluid of a patient suffering with nervous relapse following salvarsan. The details of the experiment are given. This is the second successful inoculation on record. The inoculation was testicular and on the fifty-seventh day spirochæta pallida was found in fluid aspirated from the testicle. The spirochæta pallidæ were transmitted to a second generation and the incubation period dropped to twelve days. The clinical report is extremely interesting as tending to prove that early nervous manifestations after salvarsan are not due to the toxic effect of arsenic but are a true luetic relapse. The clinical lesson is that treatment in the early secondary stage must be vigorous and prolonged.

THE OCCASIONAL CLINICAL RESEMBLANCE OF BLASTOMYCOSIS AND SYPHILIS TO SPOROTRICHOSIS. RICHARD L. SUTTON, p. 115.

Sutton reports three cases—blastomycosis, syphilis and sporotrichosis. The clinical resemblances and differences are carefully pointed out. Interesting photographs illustrate the article.

(*Ibidem*, Jan. 25, 1913, lx, No. 4.)

ONE OF THE POSSIBLE FACTORS IN THE CAUSATION OF PELLAGRA. ALLEN H. JENNINGS AND W. V. KING, p. 271.

Jennings and King set forth the objections to the various theories involving the insect origin of pellagra. The cosmopolitan biting stable fly, stomoxys calcitrans—from its distribution and habits offers strong reasons for being considered as the possible carrier of the cause of pellagra.

(*Ibidem*, Feb. 1, 1913, lx, No. 5.)

MELANOTIC SARCOMAS RESULTING FROM THE IRRITATION OF PIGMENTED NÆVI. HENRY KENNEDY GASKILL, p. 341.

Gaskill refers to the controversy that has waged over the origin of sarcomas. He reports an interesting case of melano-sarcoma beginning on the dorsum of the foot and under various local treatments spreading in the course of a few months, over the skin and to the internal organs, with fatal outcome. Photographs and microphotographs are appended.

(*Ibidem*, Feb. 8, 1913, lx, No. 6.)

SALVARSAN IN GENERAL PARESIS. E. H. TROWBRIDGE, p. 429.

Trowbridge again gives his experience with salvarsan in the treatment of paresis. This drug gives no hope for the alleviation of paresis and a "crowding of the treatment" seems to actually hasten the patient's death.

SULPHURIC ACID CAUSTIC PASTES. W. A. PUSEY, p. 434.

Pusey writes interestingly of the various methods of preparing a sulphuric acid paste which may be used in cutaneous blemishes. This is an article prepared at

the request of the Editor to supplement the report of the Council on Pharmacy and Chemistry on a proprietary preparation.

(*Ibidem*, Feb. 15, 1913, lx, No. 7.)

SYPHILIS OF THE STERNUM. MAXIMILIAN SCHULMAN, p. 515.

Schulman reports two cases of syphilis involving the sternum.

(*Ibidem*, Feb. 22, 1913, lx, No. 8.)

THE INTERPRETATION OF THE RESULTS OF THE WASSERMANN TEST. CHARLES F. CRAIG, p. 565.

Craig warns against misconceptions prevalent as to the interpretation of the Wassermann reaction. The nature of the reaction is explained. In twenty per cent. of primary cases the Wassermann reaction may be expected to be negative. Five per cent. of secondary cases give a negative reaction while in tertiary cases, fifteen per cent. are negative. In latent syphilis thirty-five per cent. give a negative reaction. In congenital syphilis, ninety per cent. give a positive reaction; in paresis nearly one hundred per cent. are positive and in tabes fifty to sixty per cent. are positive. A negative reaction after treatment is of no value as evidence of cure unless it remains negative for at least a year.

VACCINATION AND LOCAL ANAPHYLAXIS. JOSEPH H. BARACH, p. 569.

Barach notes the all but forgotten observation that a vaccination that does not "take" often lights up and goes through a normal evolution as a consequence of revaccination within a short period—say two weeks. Typical cases exemplifying this are reported. While several theories to explain this are commented upon, the most probable explanation lies in the theory of anaphylaxis.

THE ÆTIOLOGY AND TREATMENT OF ACNE. ERNEST DWIGHT CHIPMAN, p. 582.

Chipman reviews interestingly the bacteriology and treatment of acne vulgaris. The vaccine treatment is discussed as well as the other well recognized methods. The keynote of success consists in keeping open the mouths of the follicles. The author advises for this, among other measures, the use of a 10 to 15% resorcin paste. His conclusions are that bacteria do not figure in the production of acne unless the ducts are occluded. Vaccine treatment is unnecessary when the ducts are drained. General treatment is directed toward increasing the tone of the skin.

THE SERPENT'S TOOTH IN FORMALDEHYDE. WILLIAM E. MORGAN, p. 590.

Morgan writes of his personal experience and misfortune in the use of formaldehyde as a disinfecting lotion or as a denaturing agent for alcohol. So sensitive have he and others become that even the fumes in a disinfected room cause intense irritation of the whole skin. The treatment of this dermatitis is outlined according to personal experience. Cleansing with olive oil and the use of a modified Lassar paste are the main features.

(*Ibidem*, March 1, 1913, lx, No. 9.)

AN ARGYLL ROBERTSON PUPIL BECOMING NORMAL AFTER MERCURY AND SALVARSAN. J. J. ZAUN, p. 664.

Zaun reports the case of a woman aged thirty-two, in whom the Argyll Robertson pupil became normal after mercury and salvarsan treatment.

(*Ibidem*, March 8, 1913, ix, No. 10.)

DEAFNESS FOLLOWING THE USE OF SALVARSAN. C. A. CLAPP, p. 742.

Clapp reports a case of deafness following salvarsan intravenously. He also states that he has personal knowledge of three other cases occurring in Baltimore in the last two years.

(*Ibidem*, March 22, 1913, ix, No. 12.)

LEISHMANIOSIS (ORIENTAL SORE) OF THE NASAL MUCOSA. L. B. BATES, p. 898.

Bates reports a case of oriental sore affecting the nasal mucosa. This seems to be the second case in the literature affecting this particular situation.

(*Ibidem*, April 12, 1913, ix, No. 15.)

SPOROTRICHUM SCHENCKII. KENNETH TAYLOR, p. 1142.

Taylor interestingly describes the morphology in cultures and tissues, the staining and cultural characteristics, the pathology and pathogenesis of the sporotrichum Schenckii. The strains with which the author's work was done were isolated from a case of human infection by Armstrong and from an equine case.

(*Ibidem*, Apr. 19, 1913, ix, No. 16.)

THE RECENTLY DESCRIBED PARASITE OF SYPHILIS. A. K. DETWILER, p. 1225.

Detwiler has repeated the technique of Ross for discovering microscopically the parasite of syphilis. The so-called parasite is figured and described as it is seen in the blood.

(*Ibidem*, April 26, 1913, ix, No. 17.)

RECOVERY IN BRAIN SYPHILIS AFTER THE USE OF SALVARSAN. NATHAN B. EDDY, p. 1296.

Eddy reports the case of a man aged thirty-four with acute brain syphilis. Under salvarsan intravenously, in spite of apparent contraindication, "recovery was quite complete."

(*Ibidem*, May 3, 1913, ix, No. 18.)

MYCETOMA IN AMERICA. RICHARD L. SUTTON, p. 1339.

Sutton reviews briefly the cases of Madura foot which have occurred in America and adds an interesting report of two more cases under his own observation. The literature of the disease is succinctly given. The article is enriched by splendid photographs and one drawing of the organism.

AN EYE LESION FOLLOWING TWO INTRAVENOUS INJECTIONS OF SALVARSAN BUT RELIEVED BY ITS FURTHER USE. HAROLD J. LEVIS, p. 1359.

Levis reports a case in which two intravenous injections of salvarsan were followed by retinitis with failing vision in one eye. This was relieved by further use of the drug—nine intravenous injections in all.

(*Ibidem*, May 24, 1913, lx, No. 21.)

OILY INJECTIONS OF SALVARSAN—A WARNING. H. H. HAZEN, p. 1618.

Hazen records his objections to oily preparations of salvarsan. These are in the main the development of local complications—abscess, phlebitis and in one case plumonary embolism. In six cases abscess developed in three to twenty-four months after injection.

(*Ibidem*, May 31, 1913, lx, No. 22.)

BASIC FUCHSIN IN CHRONIC LEG ULCER. A PRELIMINARY REPORT. EUGENE S. MAY AND M. L. HEIDINGSFELD, p. 1680.

May and Heidingsfeld report on the use of basic fuchsin in chronic leg ulcer. On the basis of experimental work, they determined that this agent was a germicide, non-toxic and diffusible. A formula containing fuchsin (Grübler's Fuchsin für Bakt.) one part, petrolatum five parts and anhydrous wool fat, 100 parts was finally found the best for use as it was always well tolerated. The temporary accidental substitution of commercial fuchsin resulted in intolerance of the remedy. The authors' experiments were not carried to completion owing to accidental circumstances but sufficient evidence was accumulated to lead them to recommend this drug as being extremely efficacious in this class of cases. A wider field is predicted for it.

A COMPARISON BETWEEN ZOSTER OF THE FACE AND THAT OF THE LEG, AS SHOWN IN TWO CASES RECENTLY OBSERVED. DOUGLASS W. MONTGOMERY AND GEORGE D. CULVER, p. 1692.

Montgomery and Culver report two cases of herpes zoster—one of the face and one of the left leg below the knee. The rarity of zoster below the knee is commented upon. The first case was limited to the first branch of the trigeminius. The unusual features about it were a paralysis of a motor nerve and a subsequent glaucoma which finally yielded to treatment.

TREATMENT OF SUPERFICIAL NEW GROWTHS BY PURE RADIUM BROMIDE. FRANCIS H. WILLIAMS AND SAMUEL W. ELLSWORTH, p. 1694.

Williams and Ellsworth report the results of the treatment of 181 cases of skin cancer with pure radium bromide. Of these cases, 154 were healed, 7 were not healed, 3 were still under treatment and 17 discontinued treatment. Of the 154 cases that were healed, 21 had been well less than a year, all the others for periods of one to seven or more years. There were 16 recurrences. Three patients died of other diseases. The technique of treatment is not accurately given, the authors stating that experience and judgment are the best guides. Sometimes two or three treatments and sometimes twenty or more were required for healing an epithelioma. The time of each treatment was from one to two to ten minutes. As a rule 50 mg. of pure radium bromide in a capsule were employed in the treatments. The authors also state the well known fact that radium is of value in other skin diseases such as keloids, eczema, birthmarks, etc. No case of radium burn has occurred in their practice and radium has the advantage over X-rays of giving a constant output of radiations.

(*Ibidem*, July 19, 1913, lxi, No. 3.)

SKIN DISEASES AMONG FULL-BLOOD INDIANS OF OKLAHOMA. EVERETT S. LAIN, p. 168.

Lain gives a very interesting report of the incidence of skin diseases among the full blooded American Indians. Among his conclusions, based on the com-

plete examination of 1000 and the more or less incomplete examination of 5000 individuals, are the following: Syphilis is fairly common, tuberculosis of the glands is very prevalent, baldness was probably unknown prior to civilization. Pellagra is as yet unknown, while the uncivilized Indian is "almost immune to cancer."

CUTANEOUS AFFECTIONS OF CHILDHOOD. ALFRED SCHALEK, p. 176.

Schalek reviews some of the cutaneous affections of childhood. The relations of diet, the nervous system, etc., to cutaneous eruptions is interestingly touched upon. The nomenclature is in an unsatisfactory condition. Some diseases are almost limited to childhood while the symptoms of certain other diseases deviate from these in adults. In therapeutics, two points are urged—first, the correction of the cause and second, the recognition that the skin tends naturally to get well. Hence we should be conservative and not too aggressive in our local management.

(*Ibidem*, July 26, 1913, lxi, No. 4.)

EMPIRICISM IN DERMATOLOGIC THERAPEUTICS. M. L. RAVITCH, p. 265.

Ravitch states that empiricism in medicine is rampant. This pertains especially to dermatology and numerous examples are given to indicate that a host of remedies are often recommended empirically for different diseases. He makes a plea for scientific facts instead of empiricism, to become our guides.

CREEPING ERUPTION. TWO CASES WITH RECOVERY OF THE LARVÆ. GUSTAV L. RUDELL, p. 247.

Rudell reports two cases of creeping eruption. One was that of a farmer, aged forty-five, with an eruption on the left arm, running from the shoulder downward. The line of the eruption was twelve or thirteen inches long. An unsuccessful attempt to recover the larva was made. Case two was that of a boy aged thirteen. Two lines of eruption extended from above the left eye downward over the eye, the second line being external to the eye. The larva was recovered from the lower end of the line. A photograph of the second case and drawings of the larva are appended.

THE HISTOPATHOLOGY OF POMPHOLYX. RICHARD L. SUTTON, p. 240.

Sutton has made a most interesting investigation of pompholyx from the histological point of view. Nine cases were studied clinically and seven were biopsied. Over 2000 sections were examined. Undertaken with the view that the vesicles of pompholyx were probably in connection with the sweat glands, histological examination did not confirm this view. In only two sections was there any connection between the sweat ducts and the vesicles. Several patients were also put upon pilocarpine but while sweating was profuse in other parts of the body, the pompholyx vesicles showed no change. Several cases then received potassium iodide and the contents of the vesicles were tested for iodine with negative results. The author concludes from his study that the pathologic changes in pompholyx are confined almost wholly to the prickle layer. The coil glands are not involved and the ducts are implicated only by accident. The condition is very probably a neurosis, the direct exciting cause being a toxine rather than of local microbic origin.

(*Ibidem*, Aug. 9, 1913, lxi, No. 6.)

ERYTHEMA SCARLATINOIDES. LEON J. MENVILLE, p. 413.

Menville reports a case of erythema scarlatinoides with tendency to yearly recurrence in the Spring.

OUR TENDENCY TO FADS. JOSEPH ZEISLER, p. 379.

Zeisler comments on the American tendency to short lived fads. A few of these are mentioned, such as the treatment of prostatic hypertrophy by orchidectomy, the galvano-cauterization of the prostate, nerve stretching for tabes, injections of paraffine for cosmetic defects, etc. All of these have run a short course. The proper use of X-rays, the great tendency toward the unskillful use of vaccines and the use of "phylacogens" are touched upon. Clinical knowledge and laboratory methods should go hand in hand if the dermatologist is to perform his work successfully.

AN ANOMALOUS CASE OF WHITE-SPOT DISEASE. H. H. HAZEN, p. 393.

Hazen reports an interesting case of white spot disease. Among his conclusions are the following: There are two groups of cases that may give rise to white spots, the *morphæa guttata* group and the *lichen planus atrophicus* group. These differ clinically and histologically. The author's case was unique in that it changed clinically while under observation from the *morphæa* group to the *lichen* group. There are cases that merge into either group and no hard or fast line can be drawn between them. The author's case report is interestingly worked out. Photographs and micro-photographs are appended and an interesting histological survey is given.

IDIOPATHIC ATROPHY OF THE SKIN, WITH REPORT OF A CASE. H. G. IRVINE, p. 396.

Irvine reviews the subject of idiopathic atrophy of the skin and reports an interesting case. In the category of idiopathic atrophies he includes only those cases which cannot be accounted for by any known disease and which present a dermatitis of gradual and insidious onset, followed by atrophy. The classification of Finger and Oppenheim is followed and the author's case is presented as one of *dermatitis atrophicans diffusa*. The clinical history and histopathology are given and many interesting cuts, clinical and microscopical, are appended.

NEUROMA CUTIS (DOLOROSUM). M. L. HEIDINGSFELD, p. 405.

Heidingsfeld notes the rarity of neuroma of the skin as evidenced by only two well defined cases in the literature, to which he adds a third case. All subcutaneous nodules are excluded. Probably some cases of neuroma are not recognized. Every chronic lesion of the skin attended with severe and paroxysmal pain should be carefully examined for nerve abnormalities. The histology of the writer's case is carefully given and cuts are appended. The resemblance to myoma cutis is noted.

THE NEW CUTANEOUS MYCOSES. ERNEST DWIGHT CHIPMAN, p. 407.

Chipman reviews the botanic basis of the various fungi affecting the skin. He discusses the cutaneous mycoses, the specific fungus of which is of relatively recent discovery. These are: *trichomycosis* of Castellani, *blastomycosis*, *granuloma coccidioides*, *sporotrichosis*, *oidiomycosis* and *hemisporosis*. Several interesting case reports with photographs are included. The clinical lesson is that any subcutaneous nodule or refractory abscess should be subjected to careful investigation to determine the presence or absence of pathogenic fungi.

MEDICAL RECORD.

(Mar. 1, 1913, lxxxiii, No. 9.)

Abstracted by LOUIS CHARGIN, M.D.

THE LEUTIN SKIN TEST IN THE DIAGNOSIS OF SYPHILIS. A. G. RYTINA, p. 384.

A good review. The writer finds this test a valuable addition to our diagnostic armamentarium.

(*Ibidem*, Mar. 8, 1913, lxxxiii, No. 10.)

ULCEROMEMBRANOUS ANGINA (VINCENT'S) AND ITS TREATMENT, WITH REPORT OF CASES. C. SUTTER, p. 424.

Sutter contends that this disease is too frequently overlooked. He asserts that if smears were more frequently resorted to, errors would be less common.

(*Ibidem*, Mar. 15, 1913, lxxxiii, No. 11.)

MALIGNANT DISEASES OF THE TONGUE AND MOUTH. R. ABBE, p. 461.

The author sums up his excellent paper in the following words: "Thorough surgery is still the supreme reliance in eradication of malignant disease of the mouth and early resort to it is the patient's chief hope of cure. Radium has many interesting conquests in the field, but in advanced cases of cancer, its good effect is transient; in giant cell sarcoma it is a specific cure." The vicious causative effect of tobacco in the mouth is demonstrated. Leucoplakia has no curative remedy unless it be radium.

(*Ibidem*, May 3, 1913, lxxxiii, No. 8.)

NEWER IDEAS CONCERNING THE PROBLEM OF CANCER ÆTIOLOGY. L. BRISTOL, p. 787.

This splendid article is admirably summarized by the author somewhat as follows. After a review and criticism of the older theories, and a consideration of recent facts brought out in relation to the subject, the writer suggests some new ideas as to the cause or causes of cancer, treating the subject from the broad standpoint of a combination of biology, chemistry, physics, physiology, bacteriology and pathology, rather than from any of these alone.

As a basis for the development of cancer, primary and secondary "precancerous" stages are conceived: the primary stage being local cell degeneration or necrosis due to all the known causes of such changes,—a pathological problem involving mechanical, chemical, physical, parasitical and physiological factors. The secondary stage is a local disturbance of chemical equilibrium,—a chemical rearrangement,—including an affinity of these degenerated areas for, and an attraction to them of certain inorganic salts of the blood—a problem of local disturbed metabolism. It is then suggested that such a change in local chemical environment may influence the growth of neighboring cells, by causing them to take on increased permeability, absorptive powers, and oxidation and lead to accelerated activity and growth, even to malignancy.

The author then proceeds to adapt these ideas to some of the phenomena of cancer.

THE PASSING OF PARASYPHILIS. S. POLLITZER, p. 797.

The recent demonstration of the spirochetes in the brain tissue of paretics, the writer states, has now finally settled the much mooted question of the relation that syphilis and paresis bear to each other. At one stroke he aptly states, "the discovery has cleared away the dust of 40 years of controversy." Paresis is not an indirect effect of syphilis, but is a disseminated spirillosis of the brain, is syphilis itself."

The early discovery of the pallida in tabes is predicted. Pollitzer warns against delay in treatment. The knowledge that the spirochetes rapidly disseminate throughout the system, including the brain, with its disastrous results here, makes it obvious that energetic treatment must be instituted as soon after the infection as the diagnosis can be made.

(*Ibidem*, May 24, 1913, lxxxiii, No. 21.)

TUBERCULIDES. W. CUNNINGHAM, p. 935.

This is an elementary consideration of the dermatoses classed under the heading tuberculides. A point dwelt upon is the practical identity of the various cutaneous affections enumerated (acne varioliformis, acnitis and folliclis).

(*Ibidem*, May 31, 1913, lxxxiii, No. 22.)

PROSTITUTION IN NEW YORK CITY. McMURTRIE, p. 970.

This paper is a review and discussion of Kneeland's "Commercialized Prostitution in New York City."

ANGIONEUROTIC OEDEMA. J. LOBSENZ, p. 975.

Lobsenz reports a case of angioneurotic oedema, in which he could trace a direct relation between the gastrointestinal disturbance (resulting from excessive fatty and carbohydrate diet) and the above named condition.

NEW YORK MEDICAL JOURNAL.

(Mar. 8, 1913, xcvii, No. 10.)

Abstracted by LOUIS CHARGIN, M.D.

SCLERODERMA "INUSITATUM." W. CUNNINGHAM, p. 489.

The unusual features in this case noted by the author are: 1. The limitation of the scleroderma for a period of 15 years to the legs. 2. The involvement of the soles. 3. The decidedly sharp line of demarcation and at almost the same level on both legs. This patient likewise presented a Dupuytren's contraction and was affected with rheumatoid arthritis, all conditions of supposedly nervous origin. Is it not possible, the author asks, that the ætiologic factor operative in the one may be responsible for the others?

(*Ibidem*, Mar. 22, 1913, xcvii, No. 12.)

EXPERIENCES WITH NEOSALVARSAN. THE INTRAMUSCULAR METHOD. J. KAUFMAN, p. 598.

Kaufman has experimented with intramuscular injections of neosalvarsan in some 50 cases. The method employed is that of Dr. Wolbarst, which is as follows.

The powder is mixed in a mortar containing 3 or 4 cc. of glycerin (C. P.); to this is added a few drops of 1% betaeucaine or alypin solution in distilled water. The suspension becomes clear. Four spots are located, two on each buttock, into which 1 cc. of the solution is injected. A possible objection to this method is that severe pain may follow the injection. But this is not commonly so. The writer finds neosalvarsan quite as potent as salvarsan and that clinically the intramuscular method is more effective and enduring. With aseptic technique there is no danger of abscess or necrosis.

THE EFFECT OF *DIPLODIA ZEÆ* AND SOME OTHER FUNGI UPON SOME PHOSPHORUS COMPOUNDS OF MAIZE. H. REED, p. 609.

From the author's studies it would appear that *diploдия zeæ* and other fungi grown upon corn meal liberate material amounts of inorganic forms; in the case of phosphorus up to nearly 50 times the amount of P_2O_5 estimated in sound maize. Such infected corn meal loses in weight, the loss increasing with the age of culture. Aside from the question of the possible toxicity of the inorganic phosphates thus liberated or their possible rôle in the ætiology of pellagra, the data show what is interpreted as a marked deterioration in the food value of such maize, due to the degradation of organic phosphorus and other compounds. As the fungi continue to grow, they may take up a portion of the inorganic phosphates, possibly to form bodies having toxic properties.

(*Ibidem*, Mar. 29, 1913, xcvii, No. 13.)

MASSIVE DOSE X-RAY TREATMENT OF CUTANEOUS EPITHELIOMA. G. M. MacKEE AND J. REMER, p. 633.

This excellent paper the authors begin with explanatory remarks defining massive and fractional dose methods and differentiating between the direct and indirect method of quantitative and qualitative dose measurements. In employing the intensive dose method, they express a preference for the direct method of measurement and find the Holzkecht radiometer for quantitative and Benoist radiochronometer for qualitative estimation as most satisfactory in their experience. Discussing the advantages of the massive over the fractional dose method they find, firstly, the former more scientific, since it lends itself to accurate measurement. Secondly, this method obviates the almost unlimited visits of the patient and lastly, the most important advantage, requires elucidation. Heretofore it was customary to apply the X-ray to epithelioma in small doses, with somewhat indifferent results. We know that the application of small amounts of X-ray over prolonged periods can produce epithelioma. Is it not possible, they ask, that such application in epithelioma will only add to its malignancy? Experience has taught that the nearer the massive dose method is approached, the better the results. It would therefore seem advisable in the treatment of epithelioma to give as nearly as possible the exact or minimum amount necessary to cure the individual case. They have been able to prove that the only way to cure a cutaneous epithelioma with the minimum amount of ray is to obtain the desired result in one treatment. This will be evident from the following consideration. If, for instance, 6 H. units of a No. 6 or 7 Benoist ray, administered at one sitting will cure a given case, the same effect will not be noted if this dose is divided. Let us assume that only 4 or 5 H. units were given at the first séance. It is a definite rule to allow a lapse of 3 weeks between treatments. Now, the additional 2 units will not suffice for a cure. It will be necessary to again administer practically the full original dose of 6 H. units. It is obvious therefore, that in the fractional dose method, considerably more ray will be administered than is necessary for the cure of the lesion. The production of a chemical antibody resulting from oft repeated mild applications is suggested; such antibody perhaps resist-

ing the beneficial influence of the ray. A 6 or 7 B. ray is in their opinion sufficient for all cutaneous epithelioma. Filtration they think is only necessary when the growth is dense and it extends into the subdermal tissue.

As to technique, they follow no definite scheme: the curative dose is estimated in accordance with the age, the site and character of the lesion. A safe method is to give a normal dose at the first sitting and subsequently according to indications. A first degree radiodermatitis they consider of advantage. They do not wish to be understood as urging the necessity of a one-treatment cure, but advise accurate measurement of dose and a cure of the disease with a minimum amount of ray. If the first treatment has caused an erythema and yet there is no improvement in the lesion after a month, surgical intervention is urged. If some involution has occurred, a similar exposure is given 4 weeks after the first. Two or three treatments suffice for basal cell epithelioma and probably as well for squamous celled tumors without glandular involvement. In deep cancers too, they employ the massive dose, filtering the ray where the skin is healthy. Numerous observations are mentioned in support of their technique and theories. Eight case reports with photographs are detailed.

HYPERIDROSIS; ÆTIOLOGY AND TREATMENT. H. C. WERTHEIMER, p. 658.

A brief resumé.

(*Ibidem*, April 5, 1913, xcvii, No. 14.)

HYPERTRICHOSIS. A. BRAND, p. 706.

The author deplores the attitude of the profession with regard to the cosmetic field. The opprobrium cast upon it he thinks is unjustified. The removal of facial blemishes and superfluous hair requires skill and special knowledge. Whatever demands the possession of an "artistic hand" and high grade technical skill should not be looked upon by the physician as unworthy of his endeavor. A general review of the subject of hypertrichosis follows.

A CASE OF PSORIASIS. J. EPSTEIN, p. 714.

Epstein reports a case of psoriasis covering the entire body, of 6 months' duration, which he has successfully treated with thyroid extract, gr. iii t.i.d. and but the scant use of a 10% chrysarobin ointment. This case had been previously treated by two other physicians with no benefit. The writer thinks the good effect of the thyroid seems suggestive.

(*Ibidem*, May 17, 1913, xcvii, No. 20.)

WHAT THE PRACTITIONER SHOULD KNOW OF THE WASSERMANN REACTION. G. WYETH, p. 964.

A description of the technique as performed in Wassermann's laboratory.

(*Ibidem*, May 17, 1913, xcvii, No. 20.)

VENEREAL DISEASES. THE ATTITUDE OF THE DEPARTMENT OF HEALTH IN RELATION THERETO. H. BIGGS, p. 1012.

Biggs explains that after a three year deliberation, the Board of Health of the City of New York has finally adopted a series of resolutions requiring the notification of all cases of venereal disease treated at public institutions and notification of privately treated cases giving the number treated only. The resolutions provide that such reports "shall be regarded as absolutely confidential," and "shall

not be deemed public records." Further, that facilities are to be supplied for the free examination of discharges, smears etc., and the examination of the blood for the Wassermann and gonorrheal complement fixation test. The reasons for such action as set forth are: 1st. Venereal diseases are infectious and form a menace to public health. They are preventable. The Health Department is charged with the control and prevention of such diseases; therefore action by such board should be taken. 2nd. Sanitarians have not attempted to deal with these diseases because the sanitary problems are interwoven with vice and immorality, and attempts have been made by police regulation. 3rd. But police regulation has proven unsatisfactory and the moral sense of the community is against it. It seemed therefore the duty of the department to deal with it, but purely from the sanitary standpoint. 4th. It is believed that the profession and laity are in the proper attitude to receive the application of scientific sanitary procedures. From the start the movement has met with considerable opposition and such indeed was anticipated. Similar opposition, he reminds us, was encountered in the case of tuberculosis but as in the latter, he predicts "long delayed success." The importance of early diagnosis and treatment of syphilis is obvious. The writer expressly states that the department does not wish to treat venereal diseases if other agencies will properly do so. Investigation seemed to show that, with few exceptions, public clinics did not regularly follow modern methods of treatment. Therefore the Department felt it incumbent upon it to provide means for proper treatment, but in view of the antagonism of the profession it did not press what seemed an obvious necessity.

Two public diagnosis clinics were however established, in which patients are examined and blood taken at the request of the attending physician, also of such cases as have no attending physician. These have averaged 13 cases a day. They feel confident that the facilities offered will be more widely utilized as soon as physicians recognize their usefulness. The enormity of the problem is realized. It is estimated that 200,000 infections occurred in the city during 1912. Next to the bacteriological examinations, the most important feature of the work will be educative in character. Facilities for the institutional care of infectious cases should be provided, if necessary, by the Health Department. In closing, he expresses the belief that supervision, prompt and efficient treatment will cause a large reduction in the number of cases of venereal disease.

DISPENSARY FACILITIES FOR THE TREATMENT OF SYPHILIS.

H. SWIFT, p. 1012.

The present manner of the distribution of syphilitic patients in dispensaries according to symptomatic complaint, Swift contends, is erroneous. It leads to improper care of the patient, in that when the symptoms are relieved, treatment is discontinued. Syphilis is syphilis no matter where localized and is to be treated as such. If we accept this view, the centralizing of the dispensary handling of these cases is manifest. Perhaps it can be best placed under the immediate supervision of the dermatologist. He sees the greatest number of cases. Associated with him should be a consulting staff of members of the various specialities. Perfect laboratory facilities are absolutely essential to such a centralized clinic, for the value of exact and early diagnosis is now clear. From this clinic too, the social service work could be more efficiently carried out. With all this, the problem of the proper handling of syphilis is only partially solved, unless the wards of all hospitals are opened to patients in all stages of syphilis.

NEOSALVARSAN. A NEW SIMPLE APPARATUS FOR ITS INTRA-VEIN USE. O. SUGGETT, p. 1035.

Suggett employs an Erlenmeyer flask of 200 cc. capacity, in which the solution is made. To this is fitted a rubber stopper with two holes, into which two

pieces of glass tubing are inserted, one acting as an air vent, reaches beyond the level of the fluid when the bottle is inverted; and the other flush with the inner surface of the stopper and projecting externally sufficiently to attach the rubber tubing.

(*Ibidem*, May 31, 1913, xcvii, No. 22.)

THE OLD METHOD OF TREATMENT OF SYPHILIS VERSUS THE NEW. M. PAROUNAGIAN, p. 1134.

Parounagian traces the development of the treatment of lues with mercury from its first known introduction, through its various phases. With the introduction of salvarsan, the subject has taken on a new aspect. The admitted potency of the new preparations makes their use desirable, and the patient should be given the chance of cure which salvarsan holds out, but should not be denied the benefits which we know follow the use of mercury. He advises, in early cases, the administration of 3 or 4 injections of "606" and this followed by a vigorous course of mercury. Finally, if a choice between the two remedies would be imperative, mercury, in his opinion, should be given the preference.

BOSTON MEDICAL AND SURGICAL JOURNAL.

(Oct. 16, 1913, clxix, No. 16.)

Abstracted by CHARLES T. SHARPE, M.D.

NOTES ON PELLAGRA IN MASSACHUSETTS, WITH REPORT OF TWO CASES IN DANVERS STATE HOSPITAL. J. B. MACDONALD, p. 567.

NEW YORK STATE JOURNAL OF MEDICINE.

(October, 1913, xiii, No. 10.)

Abstracted by CHARLES T. SHARPE, M.D.

REPORT OF A CASE OF NEAR DEATH AFTER INTRAVENOUS INJECTION OF SALVARSAN. VICTOR C. PEDERSEN, p. 539.

The patient was an alcoholic and a nephritic, fifty years of age. He went into a state of collapse seven hours after the injection of 300 cc. of solution containing 0.6 of a gram of salvarsan. The condition was probably due to alcoholic myocarditis. Heroic stimulation revived the patient. Two similar cases, reported by Dr. John A. Fordyce in the *Journal of the American Medical Association*, October 5, 1912, one of which was fatal, are reprinted with the article.

An interesting feature of Pedersen's case was the pain and marked reaction in the gumma.

SOUTHERN MEDICAL JOURNAL.

(October, 1913, vi, No. 10.)

Abstracted by CHARLES T. SHARPE, M.D.

A DESCRIPTION OF AINHUM AS SEEN ON THE CANAL ZONE, WITH REPORT OF INTERESTING CASES OCCURRING IN ONE FAMILY. HENRY WEINSTEIN, p. 651.

This article is an excellent presentation of an interesting disease. The author discusses the history, distribution and characteristics and quite fully the etiology

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and the various theories as to the cause of the disease. The histopathology is also given.

ETIOLOGY AND PATHOLOGY OF NEOPLASMS OF THE BREAST.
JESSE J. CULLINGS, p. 663.

TUMORS OF THE BREAST; SYMPTOMS AND TREATMENT. WILLIAM
T. BLACK, p. 666.

Syphilis, tuberculosis, eczema and Paget's disease of the breast are referred to in this article and a case of the last, occurring in a virgin of eighteen years of age, is reported.

ACUTE ECZEMA EARLY IN THE COURSE OF SYPHILIS. H. H.
HAZEN, p. 672.

Hazen reports four cases of acute eczema occurring in negroes with typical chancres. Local treatment produced no results in three of the cases, but they cleared up readily with mercurial injections. The fourth was seen but once. He considers it an interesting coincidence and wonders if the spirochætæ were the exciting cause of the eczema.

CALIFORNIA STATE JOURNAL OF MEDICINE.

(October, 1913, xi, No. 6.)

Abstracted by CHARLES T. SHARPE, M.D.

DERMATOLOGICAL CASE REPORTS. HARRY E. ALDERSON, p. 390.

Alderson reports: circinate eruption of the tongue; one case of arsenical pigmentation and keratoses; one case of alopecia areata caused by nervous shock; one case of hydroa vacciniforme or recurrent summer eruption.

PELLAGRA. AUSTRUTHER DANDSON, p. 420.

A report of a fatal case, with an interesting discussion on the simulidæ, of which six varieties are known in southern California.

JOURNAL OF THE IOWA STATE MEDICAL SOCIETY.

(Oct. 15, 1913, iii, No. 4.)

Abstracted by CHARLES T. SHARPE, M.D.

VISCERAL SYPHILIS. WALTER L. BIERRING, p. 242.

This article is a series of case reports of syphilitic involvement of the liver (two cases); of the heart muscle (three cases); of the kidneys (one case). In the diagnosis of visceral syphilis three essentials are to be considered.

1. Careful examination for any sign of past or co-existent syphilitic disease.
2. Presence of the Wassermann reaction.
3. Inability to explain existing symptoms by any other applicable clinical condition.

A fever is most often seen in hepatic syphilis.

In analyzing the symptoms of cardio-vascular syphilis, it should be recognized that they are hardly, if at all, different from other forms of cardiac disease. Certain forms should excite suspicion:

1. Sudden failure of the left heart, as indicated by giddiness, fainting and failure of strength. A mitral leak coming on in men of middle age, without any previous cardiac disease, or without evidence of renal or arterial disease.

2. Cases with features of angina pectoris at an age when angina is not usually found.

3. Cases with features of Stokes-Adams disease, fainting and convulsive attacks, slow arterial and a quick venous (jugular) pulse.

JOURNAL OF THE MEDICAL ASSOCIATION OF GEORGIA.

(October, 1913, lli, No. 6.)

Abstracted by CHARLES T. SHARPE, M.D.

SYPHILIS FROM THE STANDPOINT OF THE PHYSICIAN. COSBY SWANSON, p. 203.

Swanson advocates making syphilis reportable as an aid in protecting the public, by locating at least some of the foci of infection.

Regulate the habits of the infected persons, both men and women, subjecting them to observation and quarantine until properly treated, as is required in other contagious diseases.

When the medical profession becomes the champion of the strong, as it has for countless generations been the champion of the weak, then it will conduct humanity to victories yet undreamed of, and syphilis, with other contagious diseases, will be relegated to the things of the past.

Swanson has discontinued the use of neosalvarsan entirely, preferring salvarsan.

RAYNAUD'S DISEASE; A REPORT OF THREE CASES IN THE COLORED RACE. LAWRENCE LEE, p. 181.

VIRGINIA MEDICAL SEMI-MONTHLY.

(Oct. 10, 1913, xviii, No. 13.)

Abstracted by CHARLES T. SHARPE, M.D.

A FORM OF TREATMENT IN A CASE OF LUPUS VULGARIS AND PULMONARY TUBERCULOSIS. WILLIAM J. MANNING, p. 318.

An application of 3. cc. of Lugol's solution in combination with 0.5 cc. of old tuberculin of 1-1000 dilution, in 50 cc. of a saturated saline solution was made, soaking a piece of lintine previously cut, to fit the entire infected surface of the face, inclusive of an involved gland; and over this a black tin electrode, 18 gauge, was molded and cut in such a way as to leave about one-half inch of lintine showing. This is necessary to prevent burns and discomfort to the patient.

A galvanic current of 15 milliamperes was allowed to flow through the anterior or negative electrode, the positive forming the posterior electrode. The positive electrode, smaller in proportion to the negative, was placed on the right side of neck and similarly prepared, save that the lintine was moistened with a

saturated salt solution, the intent being in all instances to drive the electrolyzed iodine and tuberculin ions in combination, through the tissues, at an angle from pole to pole, a distance of approximately two-and-a-half inches. The current was increased for the second half hour to 20 milliamperes.

Three treatments were given two days apart, and the last, one week from the second, but the current strength was raised to 30 milliamperes in the last half hour of each hour's treatment, from an initial strength of 15 milliamperes.

From the photographs presented, it is evident that marked improvement occurred.

The case of pulmonary tuberculosis treated similarly showed encouraging results.

MARYLAND MEDICAL JOURNAL.

(September, 1913, lxvi, No. 9.)

Abstracted by CHARLES T. SHARPE, M.D.

THE LABORATORY DIAGNOSIS OF SYPHILIS. CHARLES C. W. JUDD, p. 220.

An excellent resumé of laboratory methods of diagnosis.

NEW ORLEANS MEDICAL AND SURGICAL JOURNAL.

(May, 1913, lxx, No. 11.)

Abstracted by CHARLES T. SHARPE, M.D.

THE EARLY SIGNS OF LOCOMOTOR-ATAXIA AND OTHER PARASYPHILITIC CONDITIONS OF THE NERVOUS SYSTEM. E. M. HUMMEL, p. 795.

The student of old syphilitic affections of the nervous system is constantly impressed with the fact that nerve tissue bears the most serious and blighting influence of this great scourge of the race.

Not only are the lesions in the other tissues of the body in the nature of acute wounds therefore susceptible of prevention and cure, with only a scar or possibly deformity the most regrettable result, but, as we are constantly reminded, syphilis not infrequently may never, through years of its existence, declare itself by frank and accessible lesions.

One of the most frequent clinical types of parasyphilis of the nervous system is a sort of neurasthenia, associated with a peculiar type of psychic depression, in which the patient notices that he is unable to experience, with any degree of appreciation, the strong emotions and that his zest and interest for matters of even great importance to him are dulled or lost, though he recognizes fully the logic of the situation.

Although at this time the sexual mechanism is without fault, the associated higher nervous characterizations are abolished. All the organic appetites suffer in a similar way. Fits of apathy and depression occur without apparent cause.

Metasyphilics have an inordinate susceptibility to the effects of alcohol, as they are either made quickly and absurdly drunk or often put into a highly nervous and uncomfortable condition by a small amount of alcohol, and sometimes a psychosis lasting several days will be provoked by a drinking bout. A mild form

of amblyopia is apt to be one of the features of the condition, due either to a very slight involvement of the optic nerve or to the reduced psychic state. Such patients are given to sleeping a great deal, especially if they attempt to read. With it all, the body weight and apparent general health is not affected; on the contrary, they frequently become obese. If, however, the skin surface is carefully noticed, a sort of pallid hue is often observed, which is obviously due to a deproved hæmic state. Little sharp twinges of pain about the body may be noticed at this time. Frequently a negative syphilitic condition is given and a single Wassermann test of the blood might likewise prove negative. The cerebrospinal fluid should be tested and a cytological count made. Wassermann tests of the spinal fluid are apt to be more reliable than tests of the blood serum. Lymphocytosis of the cerebrospinal fluid is perhaps as valuable as the Wassermann test.

Ptosis of one or both of the eyelids is apt to occur.

Certain slight disturbances in the muscle and joint sense have already developed, best determined by placing the patient on his back and having him attempt to do accurate and purposive movements with the free lower extremities, with the eyes closed.

The pupil should be closely watched, as it affords valuable signs at this time. Distortions in the outline of the pupils very often signifies either the previous existence of a specific iritis, resulting in adhesions, or else disturbed and irregular innervation of the iris fibres. Such disturbances in the outline of the pupil, when not otherwise explained, are perhaps as important in the recognition of metasymphilis as the Argyll-Robertson pupil. Inequality of the pupils has a similar, though not such a strong significance.

Progressing degeneration processes may result in the involvement of the optic nerve. Blind or nearly blind tabetics rarely become ataxic.

Involvement of the auditory nerve sometimes occurs. Implications of the Gasserian ganglia is apt to lead to paræsthetic and trophic manifestations. The pneumogastric nerve may be implicated, with a decided disturbance of the rhythm and rapidity of the heart, with certain gastric symptoms. While the stomach and the bladder are the viscera most frequently involved in so-called tabetic crises, almost any viscus which is well supplied with sensory fibres, especially if it be closely connected with a sympathetic plexus, is apt to suffer. Crises of the eye, of the larynx, of the heart, and of the intestines have been frequently noted. Any of the more pronounced lesions usually seen in advanced tabes may occur in an isolated way, in the early progress of the disease; e.g., perforating ulcer, Charcot's joint, the loss of the nails, together with a harsh, dry condition of the hair supervenes.

Single involvement of one or several posterior nerve roots of the spine in the mid-dorsal region, may give rise to a band of either hyperæsthesia or loss of sensation around the body. An herpetic eruption may accompany the sensory disturbance.

GENERAL PARESIS; A PLEA FOR MORE THOROUGH PROPHYLAXIS. HENRY DASPIT, p. 799.

In a series of twenty cases of frank paresis, the Wassermann reaction was found to be positive in 100 per cent. Fully 50 per cent. of more than 100 cases of paresis, it has been ascertained, received a classical course of treatment, as prevails recently and is still in vogue with many of the profession.

We have not been treating syphilis properly, yet there is no other manner of prophylaxis in paresis than the conclusive cure of syphilis and our work must be done before there is any inroad into the central nervous system.

Symptoms of paresis are not evident until irreparable.

The tonic or mixed treatment, with incomplete courses of inunction, so popular

with the busy practitioner, is very obviously inadequate, irrespective of the length of time employed.

Treat every case of syphilis, old or new, with painstaking thoroughness for at least three years. Thus can we guard against the development of paresis.

INTRAMUSCULAR INJECTIONS OF MERCURY (EMULSION) IN THE
TREATMENT OF SYPHILIS OF THE NERVOUS SYSTEM. L. L.
CAZENAVETTE, p. 802.

The results obtained in the treatment of a number of cases of syphilis of the nervous system, by an intensive form of treatment as used by P. E. Archinard for nervous diseases, in the service at the Charity Hospital, has been very satisfactory. The author submits the following formula:

R	Hydrargyri biniodidi.....	gr. v
	Potass. Iodidi.....	gr. v-x
	Olei Olivarum.....	ʒi

Macerate first two and add a few drops of water. Then add the oil and sterilize thoroughly.

Dose, from 10 to 20 drops, or from $\frac{1}{10}$ gr. to $\frac{1}{5}$ gr. of biniodide of mercury. Inject intramuscularly.

A modification of the above formula is also given:

R	Mercury biniodide.....	grs. viiss
	Castor Oil.....	ʒ ivss
	Olive Oil.....	q. s. ad. ʒ i

Place in porcelain dish and keep on water bath and when clear, sterilize thoroughly.

Dose, from 10 to 20 drops or from $\frac{1}{10}$ gr. to $\frac{1}{5}$ gr. of biniodide. Inject intramuscularly.

A number of case reports are given in this article, which show the result of the above treatment.

(*Ibidem*, August, 1913, lxvi, No. 2.)

Abstracted by CHARLES T. SHARPE, M.D.

A CASE OF PELLAGRA TREATED WITH SALVARSAN. D. W. KELLY,
p. 106.

The patient, a woman aged 26, had been ill since the Fall of 1910. One year later she developed mental symptoms. In June, 1912, she was ravingly insane and weighed about seventy-five pounds. Skin lesions developed in April, 1912, and were diagnosed pellagra in the Charity Hospital, New Orleans. Five injections of salvarsan were given intravenously in ascending doses, from three to nine grains every ten or fifteen days. By Fall she had completely recovered from her trouble, weighed one hundred and seventy-five pounds, and her mind was perfectly restored.

In discussing this paper, Dr. Joseph E. Kingston, of Shreveport, stated he had attended the patient some months previously and she was then suffering from hookworm disease.

KENTUCKY MEDICAL JOURNAL.

(July 1, 1913, xi, No. 13.)

Abstracted by CHARLES T. SHARPE, M.D.

PELLAGRA. H. P. SIGHTS, p. 567.

This author believes pellagra is a protozoan disease, resulting from an infection of the blood cells themselves. This opinion is formed from a study of microscopi-

cal examination of the diseased blood, from the time that the disease is first discovered, until a complete distinction of the cell organization, at which time the red blood cells show a complete disintegration, and death occurs in a short time.

The incidence of the disease is as follows: beginning in the latter part of May and June, it reaches its maximum in July and then declines until December. For the remaining six months of the year it is without development.

It is a general systemic disease, involving the whole organism, selecting for its invasion the blood channel; characterized by nervous symptoms, very much like infectious psychoses; accompanied by an eruption of the skin on the hands, feet and back of the neck, and manifesting itself by a red mucous membrane of the buccal cavity, a greatly disturbed stomach, very little temperature, if any, until the last stage, and leaving its mark on every system and organ of the body.

Its ravages break down every defense of the body and opens a field, fertile for the invasion and infection of every form of bacteria and especially tuberculosis and hookworm.

The incubation period is unknown. The nervous system is probably the location for the first manifestation of the disease.

Then follows a splendid description of the symptomatology.

The immigration of the Italians in the mining camps, the author believes, spread the disease in this country, as the locality of these camps and along the streams leading from them, is where the majority of cases are found and where the disease was first discovered.

SALVARSAN, A SPECIFIC IN THE TREATMENT OF PELLAGRA. B. C. ROSE, p. 575.

Reference is made to the success attained by E. H. Martin in the treatment of fifty-two cases, and a case report of one treated by the author.

HOW I TREAT AN ANTHRAX. W. A. LIGON, p. 580.

The success attained in treating carbuncles by the following method is responsible for this note.

Absorbent cotton, moistened with whisky, is placed around the carbuncle, leaving a small opening over the apex. Carbolic acid crystals are melted and one half a drachm is injected through one of the apertures, turning the needle in different directions and filling the sinuses to overflowing.

Within a few days the slough will drop out.

JOURNAL OF EXPERIMENTAL MEDICINE.

(April, 1913, xvii, No. 4.)

Abstracted by R. C. JAMIESON, M.D.,

FALSE TRANSITIONS BETWEEN NORMAL AND CANCEROUS EPITHELIUM. PEXTON ROUS, p. 494.

This article consists of plates showing the changes between normal and cancerous epithelial cells.

AMERICAN JOURNAL OF THE MEDICAL SCIENCES.

(July, 1913, cxlvi, No. 1.)

Abstracted by R. C. JAMIESON, M.D.

AN INTENSIVE STUDY OF THE EPIDEMIOLOGY OF PELLAGRA. REPORT OF PROGRESS. J. F. SILER AND P. E. GARRISON, p. 42.

Siler and Garrison went into this work with the idea of obtaining full statistics and information about all the cases in a certain district, rather than to gather statistics about a large number of cases scattered over a larger area. They studied the cases with relation to sex, occupation, geographical distribution, residence (whether rural, urban or mill-village), race and family distribution.

They found pellagra more prevalent in mill villages, apparently where the population is more congested, also that it is far less frequent among the negroes than the whites. Female pellagrins outnumbered the males three to one and the greatest number of cases of both sexes occurred between twenty and forty years of age. With regard to occupation, more cases were found among those doing housework exclusively, (females) while both sexes were about equally affected among mill workers. Their investigations seem to show that household association is more important than family relationship, where there are two or more cases in one family. (*To be concluded.*)

(Ibidem, August, 1913, cxlvi, No. 2.)

AN INTENSIVE STUDY OF THE EPIDEMIOLOGY OF PELLAGRA.
(Continued.) J. F. SILER AND P. E. GARRISON.

From their analysis of recurrences, they think there is no marked tendency to recur the same month in succeeding years, but climatic conditions influenced the early or late annual appearance. They found 83% of cases among the poorer classes and about the same percentage showed previous good health, but 59% showed illness immediately preceding; 80% of cases used well water, 15% city water and 5% spring water, but no importance is attached to the water supply.

The authors failed to find any evidence connecting the consumption of corn with the appearance of pellagra.

This has been merely a scientific, thorough and methodical research of pellagra conditions and has not tried to prove any previously formed theories.

THE ROLE OF HYDROTHERAPY IN THE TREATMENT OF PELLAGRA. G. M. NILES, p. 230.

This article deals chiefly with the hydrotherapy of the internal pellagra conditions, the use of tepid water for emesis or gastric lavage, hot colon irrigations for diarrhoea, copious water drinking, cold abdominal compresses, etc. Skin elimination can be increased and nerve symptoms often controlled by hydrotherapy.

THE ANALOGY OF PELLAGRA AND THE MOSQUITO. S. R. ROBERTS, p. 233.

Roberts believes that pellagra is conveyed by a mosquito that is day-biting and house-living. He compares the characteristics of the disease in geographical distribution, season, periodicity, ages and sexes attacked, etc., with similar phases of malaria, to show that pellagra is more likely due to a mosquito than a species of simuliun.

(*Ibidem*, September, 1913, clxvi, No. 3.)

AN INTENSIVE STUDY OF INSECTS AS A POSSIBLE ETIOLOGIC FACTOR IN PELLAGRA. A. H. JENNINGS AND W. V. KING, p. 411.

Jennings and King have made a study of the life of those insects which could be responsible for the transmission of disease. Their activities were confined to Spartanburg County, South Carolina, as were also the researches of Siler and Garrison. They were able to exclude ticks, pediculi of the clothing and head, bed-bugs, cockroaches, flies of the family Tabanidae, fleas, mosquitoes, house flies and buffalo gnats. They believe, however, that there is sufficient evidence to incriminate the stable fly (*Stomoxys calcitrans*) for the following reasons:

"The range of this one species covers and exceeds that of pellagra; its seasonal activity, likewise, is coincident with that of the disease and, although its period of greatest abundance is somewhat later than the maximum intensity of pellagra, its appearance in spring precedes that of most of the spring recurrences and new cases, at which time it is already abundant; it is an abundant species, its abundance being most manifest in rural districts, thus corresponding with the rural nature of pellagra, its numbers amply fulfilling our conception of those necessary to effective disease transmission; it bites by day only, thereby offering an explanation of the phenomenon of sex incidence and the related one of age distribution; it is intimately associated with man and habitually infests his vicinity and enters his dwellings; it bites man frequently and persistently; its longevity seems sufficient for the development of a hypothetical causative organism; it is readily and frequently carried long distances and might thus account for the occurrence of sporadic cases of the disease."

INTERNATIONAL JOURNAL OF SURGERY.

(August, 1913, xxvi, No.8.)

Abstracted by CHARLES T. SHARPE, M.D.

THE CAUSE OF PELLAGRA. (Preliminary Report.) LUCIAN LOFTEN, p. 289.

The author advances the theory that pellagra is a product of hookworm infection; that while they are now known as two distinct diseases there is a strong resemblance in the symptomatology. Both occur in warm climates and affect both races and sexes alike. Neither is contagious. Heredity and nationality play no part. Age is no barrier. The mental faculties are impaired in both diseases. The muscular structure and mental machinery suffer alike. The alimentary disturbances are practically identical. There is decided imperfect assimilation, and nutrition is always at a low ebb. The skin is dry, the hair brittle, and without proper treatment, there is an uncontrollable anæmia from the earliest recognizable symptoms. Nine cases of pellagra, studied for 22 months, form the basis for the preliminary report. All cases were treated as latent hookworm poisoning, thymol in ascending doses, up to 40 grains daily, being given. The mental condition of the patients rapidly cleared up and the gastrointestinal irritation quickly subsided. The so-called salivation was promptly checked while the erythema faded with astounding rapidity. For the skin lesions, a 5 per cent. solution of potassium permanganate was used as a moist dressing. Weekly examination of the faeces for hookworm eggs is recommended.

(Ibidem, June, 1913, xxvi, No. 6.)

Abstracted by CHARLES GOOSMAN, M.D.

GENERAL CONSIDERATIONS OF SYPHILIS OF THE NOSE, AND ITS TREATMENT. EDWARD L. GINSBURGH, p. 203.

In congenital syphilis, the characteristic "snuffles" and mucous patches are common, while destruction of bone and cartilage do not occur in the second stage, yet a certain amount of nasal deformity is quite common in syphilitic children. This consists in a flattening and spreading out of the bridge of the nose and frequently appears very early. Tertiary manifestations usually occur at about the period of puberty, though they may occur much earlier. The symptoms are the same as in the acquired form.

Acquired syphilis may affect the nose in any stage, but the initial lesion is rather infrequent here. Secondary symptoms are the same as those of acute rhinitis, except that they are very persistent. Associated sore throat usually gives more annoyance than the rhinitis. The characteristic syphilitic rhinitis, however, is due to gummatous infiltration, with a marked destructive tendency. Greenish yellow, or bloody discharges, adherent crusts or bone sequestra may all occur. The saddle nose is not due to mere defect of the septum, but rather to the cicatricial contraction, and is rarely seen in patients who have been properly treated, even though they have a large hole in the septum.

The treatment must be local as well as general. Neosalvarsan and mercury are both used. He quotes the opinion of Fordyce that "the efficiency of salvarsan will bear a direct relation to the age of the infection."

DOSAGE, MEASUREMENTS AND CONTROL OF THE X-RAY AND THE AGENTS IN THERAPEUTICS. WILLIAM BENJAM SNOW, p. 199.

While recognizing that none of the factors in X-ray dosage can be constant quantities, for instance the tube vacuum, the volume or intensity of the rays produced, or the resistance of the patient, Snow believes that the most reliable method of measuring the volume of rays projected is by passing the current through a milliamperemeter as it passes to the tube. A dose measured by one milliampere through a tube 12 or 14 inches from the surface irradiated is always a safe dosage to be employed on alternate days for 10 minutes periods, until there is a commencing dermatitis, using a low vacuum tube for skin affections, and a higher vacuum for deeper seated affections.

The Sabouraud pastille does not seem to have met with very general approval in England and France, although the Holz knecht units appear to retain prestige in Germany.

Snow believes that radiant light and heat neutralize, to a certain extent, the action of X-rays on the tissues. He, therefore, uses a massive dose of the rays in strepto-, staphylo-, and gonococcic infections, immediately following this with radiant heat and light from an arc lamp, half to one hour in duration, once or twice a day. The massive X-ray dose is obtained by 30 to 40 minutes exposure with a tube that backs a parallel spark of not more than one inch. That the Roentgen ray actually destroys the germs is improbable, but that it sterilizes or inhibits them is positive.

In cystitis, successive 10 minute treatments with a tube of high vacuum has given greater success than other measures.

In chronic appendicitis, similar short radiations, alternating with administrations of direct d'Arsonval current, are used.

In Grave's disease the results from X-rays are sufficiently good to warrant their use as a routine treatment.

POST-GRADUATE.

(August, 1913, xxviii, No. 8.)

Abstracted by CHARLES T. SILARPE, M.D.

THE SPECIFIC ORGANISM. WARD J. MACNEAL, p. 695.

This is the title of the first of an interesting series of papers which constituted a symposium on syphilis, presented to the Clinical Society of the New York Post-Graduate Medical School. Macneal reviews briefly the history, the morphology, the staining of tissue, the laboratory methods of diagnosis. Microscopic determination by the dark field illumination and the simplest method, that of the ink method of Burri or the collargol method of Harrison are described; a small drop of the fluid to be examined is mixed with a larger drop of a 5 per cent. collargol solution, the mixture spread in a thin film on a perfectly clean flamed slide, allowed to dry, and then searched with an oil immersion lens. Examination with dark-field illumination requires special equipment and more skill but is by far the most satisfactory practical method. Staining methods are probably of less value in practical diagnosis. "All laboratory methods for the diagnosis of syphilis are rendered more difficult, or even hopeless, by immediately preceding specific treatment of the disease, so that in syphilis the too common practice of treating the case first and attempting to establish a diagnosis afterward may be particularly unfortunate."

In lesions of the mouth, nose, throat or anus, other spirochetes, morphologically very similar to the *spirochaeta pallida* may be commonly found, hence great care must be exercised in interpreting positive findings.

THE WASSERMANN REACTION. R. M. TAYLOR, p. 698.

The author reviews the salient facts which led up to and underly the Wassermann reaction.

An interesting table of ten thousand reactions, performed at the Army Medical School, shows that 89.4 per cent. of primary cases gave positive reactions with increasingly high percentages from the first to the fifth week, and a still higher percentage of secondary cases, 95.6 per cent., gave positive reactions. While of the tertiary, but 86.8 per cent. showed positive reactions. Of latent cases, 65.4%, of congenital cases 84.2% and of parasyphilitic cases, 68.1% reacted positively.

The examination of the spinal fluid is of importance in neurological cases. It is of greatest import in localization, as it is only in those cases with central nervous system involvement in which the spinal fluid reacts. It occurs in a much higher percentage in general paresis and tabes dorsalis than in syphilis of the cord, and may be taken as a differential point between these conditions.

The conclusions as to the relationship of the Wassermann reaction to treatment and as a prognostic aid are interesting. A positive reaction is indicative of an active process; under effective treatment it becomes negative. Therefore if the blood be tested at various intervals, an accurate index to its efficiency will be obtained, which might be impossible from clinical observation alone. If taken some time after the course of treatment, the chances of a relapse are in inverse proportion to the time interval.

THE LUTETIN REACTION. M. C. PEASE, p. 704.

This paper covers practically the same grounds as those recently abstracted.

THE CUTANEOUS MANIFESTATIONS OF SYPHILIS. MIHURAN B. PAROUNAGIAN, p. 706.

An excellent concise description of the cutaneous manifestations of syphilis.

SYPHILITIC CONDITIONS OF THE THROAT. CLARENCE E. RICE, p. 712.

The majority of ulcerations of the nose and throat are syphilitic. Primary lesions of the mouth—chancres on the tonsil, on the lips and tongue are exceedingly rare. The author has seen but two cases of this character. Secondary lesions, mucous patches, are common and resemble a surface to which silver nitrate has been applied. Specific lesions are localized. Their frequent occurrence in the mouth is due to the abundance of lymphoid tissue present. Lesions of the larynx are usually secondary congestions to pharyngeal lesions. Earlier diagnoses and more efficient treatment have resulted in a great decrease of tertiary manifestations.

SYPHILIS OF THE GASTRO-INTESTINAL TRACT. J. GODFREY WELLS, p. 715.

The acute lesions of syphilis are ill-defined, except the primary sores found in the mouth or rectum and they present the characteristics of the primary sore found on the surface of the body.

During the stage of general infection, acute gastritis, an acute enteritis, or a gastro-enteritis may occur. This may become subacute and then chronic.

In the tertiary stage several lesions may occur. The most frequent, chronic gastritis, may be due to direct syphilitic disease, there being a round cell infiltration of the mucosa and sub-mucosa, with the formation of small gummata and partial or complete destruction of the glandular tissue,—a comparatively rare form. Secondly, an indirect class due to involvement of the liver, spleen or other organs, with an accompanying interference of the circulation.

Ulcers of the stomach are not as infrequent as was formerly thought, and it is wise to inquire into the past history of all ulcer patients. They are probably due to endarteritis, breaking down of gummata, anemia, change in the composition of the blood, or infection of erosions on the mucous surface. Tumors involving the gastric wall are less common than ulcers. If large, they may simulate cancer and may cause obstruction of the pylorus due either to secondary ulcer or to diffuse infiltration of the walls around the orifice. The diagnosis between gumma and a malignant growth must be made on the general condition of the patient, duration of the disease, and the result of active prolonged treatment.

Gastralgia and intermittent vomiting and pain are not infrequently due to syphilitic involvement of the nervous system and are early manifestations of *tabes dorsalis*.

Acute and chronic enteritis are not infrequently due to specific infection and are prone to be of long duration.

Colitis with or without ulceration may occur and is chronic. Proctitis may occur. Gummata of the rectum arise in the wall or in the surrounding tissue, are comparatively frequent and have been operated upon for cancer. The primary lesion may be situated at the sphincter or five centimeters above it. Mucous patches may be also observed.

The diagnosis of all syphilitic lesions of the gastro-intestinal tract must be made by means of the blood test, the history, and other manifestations and result of treatment.

THE HEART IN SYPHILIS. HARLOW BROOKS, p. 718.

One regrets that a paper of this status is to be abstracted. However if such a task serves to draw more attention to the findings of Brooks, it will be worth while.

A study of autopsy records showed that a very high percentage of the cases of syphilis in all stages had died from various cardiac disorders.

Of fifty consecutive cases, forty-seven showed definite luetic lesions of the heart. Death had resulted as a sequence of the specific involvement of the heart in over twenty-five per cent. of cases studied at autopsy.

Two hundred cases were selected for study. Seventy-five of these were studied at autopsy. Absolute diagnosis of the existence of syphilis in each instance was established by the Wassermann reaction, by associated syphilitic lesions, by the history, and,—in those cases which died,—by the autopsy findings.

Of eleven cases in which cardiac involvement appeared during the early secondary stages, three died and showed at autopsy a definite syphilitic myocarditis, while eight cases showed tertiary and quarternary instances of infection.

The progress of cardiac involvement is rather more rapid in females, especially in very young women.

These cases did not differ greatly in fecundity from normal persons. Evidently the lack of fertility in syphilitics has been overestimated, and it would appear that perhaps sterility is seen only in such cases as show direct involvement of the seminal glands.

Cardio-vascular symptoms were directly complained of in 164 instances. In the remaining cases, either the lesions caused unexpected death, or were found accidentally on physical examination or at autopsy. Dyspnoea is the most frequent symptom. It is constant, and one of the very earliest symptoms of cardiac involvement. When it is present without other adequate explanation, it is highly suggestive of lues. Pain in the præcordium is also a very common and a very important symptom. There is no doubt that this symptom in its relation to cardiac disease has been very generally neglected. In nine per cent. this pain was of a definite anginal character, but even more frequently the location of the pain is at the ensiform, behind the manubrium or at the angle of the left scapula. Closely associated with this sign is tenderness, so pronounced at times, that outlining of the cardiac dullness by percussion is very distressing to the patient.

Cyanosis was present in fifty per cent. of the cases. Insomnia was found to be a frequent symptom and one of difficult explanation. It was relieved by specific medication and also by customary methods to remedy heart insufficiency. Hence it is believed to be due to defective circulation within the brain and not to local syphilitic disease of the cerebrospinal axis.

In this study an attempt was made to exclude as far as possible, those instances in which aortic lesions seemed to be the important ones. Actual decompensation was present in eighty-nine cases. In these the greatest, most lasting and quickest benefit was secured from specific medication.

Endocarditis plays a relatively unimportant rôle. In diagnosis, the Wassermann reaction and the therapeutic tests are urged. The treatment has been brilliantly successful in the early cases and surprisingly beneficial even in instances of very long standing.

SYPHILIS OF BLOOD VESSELS. W. T. LONGCORE, p. 721.

Syphilitic aortitis is the subject of this paper. It is usually one of the later manifestations—ten to fifteen years after the primary infection, but it may occur early. It is a progressive inflammatory process of the wall of the aorta and usually the root, and in its development very frequently gives rise to four conditions, namely, dilatation of the aorta, aneurysm, aortic insufficiency and angina pectoris. Pain and paroxysmal dyspnoea are characteristic symptoms of syphilitic aortitis, although uncomplicated by aortic insufficiency, aneurysm or disease of the coronary arteries; and it seems very probable, as Huchard believed and as Allbutt has always held, that they may be directly connected with the inflammatory process in the aorta itself.

Attacks of paroxysmal dyspnoea are most common in cases that show disease of the aortic valves and may be the first symptom to appear. The patient is

suddenly seized with violent dyspnœa, sits up in bed, calls wildly for help and presents a picture of agony. The dyspnœa is principally expiratory, the patient is cyanotic, the blood pressure often rises to 200 mm. systolic. The attack ends abruptly. It may be accompanied by severe pain of anginal character. The probable cause of these attacks is discussed and the experiments of Francois Frank are recalled.

The pain is believed to be directly dependent upon the inflammation of the aorta and appears as a referred pain in the arm or beneath the sternum. In a number of instances, an alarming increase in pain has followed within 24 to 48 hours after a large dose of salvarsan given intravenously. In one case of angina pectoris, the patient went into a condition of status anginosus, and in a second case death occurred within 24 hours after an injection of salvarsan. The patient had had several attacks of paroxysmal dyspnœa with pain and died during such an attack.

The increase in symptoms following salvarsan treatment, the author believes, is the same as the alarming increase in symptoms which is known to occur in cases of syphilis of the nervous system when salvarsan is used in large doses, and which Ehrlich and others have explained as Herxheimer reactions. The rapid destruction of spirochetes caused by the salvarsan may liberate an excess of toxine, and thus produce a local reaction which, in the case of the aorta, calls forth an increase in symptoms. The possibility of this Herxheimer reaction should be carefully considered in the treatment of these cases.

Twenty-six cases of syphilitic aortitis treated with repeated small doses of salvarsan, showed in sixteen marked improvement in the disappearance of pain and attacks of paroxysmal dyspnœa. There was no improvement in seven, and three cases are still under observation. In some cases there has been a recurrence of symptoms after four to six months.

SYPHILIS OF THE NERVOUS SYSTEM. SMITH ELY JELLIFFE, p. 723.

There is practically no branch of medicine or portion of the body that can exhibit so many different phases and symptoms as syphilis of the nervous system.

Contrary to general belief, nervous manifestations are early. One may see very prompt effects within three months after infection—acute psychoses with meningitis, acute aphasia, paralytic syndromes and radicular neuritis, etc., also sciatica and brachial neuralgia—which comes on in from three to four or five months after the initial infection.

Of the later manifestations, paresis and tabes—these two forms of syphilis, which were for many years in dispute, have been proven to be syphilitic. The terms meta-or para syphilitic—i.e., as due to syphilis plus some other factor, following the teaching of Fournier, may now be disregarded; tabes and paresis are true syphilitic diseases; the former is a type of syphilitic radiculitis while the latter is a perenchymatous change of the brain.

A large number of feeble-minded individuals, epileptics, and children who are retarded or who never get up to normal standard are instances of hereditary syphilis and should be treated as such.

The pupillary reflexes may be present in the secondary and tertiary cases. Ninety-five per cent. of the patients with cerebrospinal syphilis show the Argyll-Robertson phenomena.

Emphasis must be placed upon cytological examinations. Practically all cases of cerebrospinal syphilis exhibit a meningitic exudation, so that the Wassermann alone should not be relied upon. In many cases of tabes the test is negative. The cell count of the cerebrospinal fluid is usually a better guide to therapy.

The nervous system is particularly refractory to treatment because it is a very delicate and complicated system of fibres which are readily damaged, and only after the damage is done is the trouble recognized. No other type of lesion so

destroys the working capacity of a man. Hence the old advice of Fournier applies to the treatment—you must strike early, hard, and often if you wish to accomplish anything in cerebrospinal syphilis. Medication by mouth is of no use whatever.

THE TREATMENT OF SYPHILIS. WILLIAM BEDFORD BROWN, p. 726.

Examine the serum expressed from any doubtful lesion for the spirochetes. If these are found, an injection of salvarsan should be given. Then for one month, $\frac{1}{4}$ grain of the biniodide of mercury three times a day, if no eruption appears, is given. If a secondary eruption appears after the injection of salvarsan, use intramuscular injections of the salicylate of mercury. Then have a Wassermann test made. If this is positive, a second injection of salvarsan should be given, and as intermediate treatment, continue the injections of the salicylate. A constant series of Wassermann tests should be made quarterly and when positive, the salvarsan should be given every two months. Local treatment: in mucous patches and in early leukoplakias use the black wash as a mouth wash. Use applications of powdered calomel to papillomata of the vulva and anus. In gummata of the lower legs, hot sitz baths twice daily, of fifteen minutes' duration are advised. In syphilis of the palms, the patient is directed to expose the palms to the fumes of evaporating calomel. For this purpose, a tripod is placed beneath a hat-box in which slits have been cut for the insertion of the hands, a tin plate is placed on this tripod and one dram of calomel evaporated by an alcohol lamp placed beneath.

UROLOGIC AND CUTANEOUS REVIEW.

(January, 1913, xvii, No. 1.)

Abstracted by CHARLES GOOSMAN, M.D.

PRURITUS VULVÆ. ARTHUR STEIN, p. 22.

Stein forbids the local use of alcoholic or aqueous application. For cleaning, olive oil is used. An ointment containing 1% of cocaine, menthol, and salicylic acid in lanoline is then applied. Uterine diseases may need operative treatment.

NOTE ON THE SPECIFIC USES OF, AND INDICATIONS FOR, SCARLET RED, BISMUTH SUBNITRATE AND METHYLENE BLUE. M. M. STARK, p. 25.

Stark considers methylene blue in 2% aqueous solution or ointment as almost specific in intertrigo. Regarding the use of scarlet red, he lays down the following conditions: Scarlet red should not be applied to suppurating or necrotic wounds. The initial strength should be kept within 10%. The scarlet red is best alternated in twenty-four hour periods with vaseline or lanoline. If the wound surface is large, apply scarlet red to the edges only, the centre being covered with any indifferent ointment.

CHRONIC AND RECURRENT DISEASES OF THE SKIN IN RELATION TO THE HEART AND CIRCULATION. DAVID WALSH, p. 1.

Walsh believes that eighty or ninety per cent. of chronic and recurrent cases of skin disease, excluding such as are obviously parasitic in origin, are associated with organic heart trouble. A number of case reports are given.

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MODERN DIAGNOSIS AND TREATMENT OF CHANCROIDS. MOSES SCHOLTZ, p. 27.

In the treatment of chancroids Scholtz prefers wet dressings. For cauterization he uses fuming nitric acid or pure phenol. He mentions eleven phagadenic cases, treated with X-rays, of which ten improved rapidly, while one got worse. Lately he has tried radiant heat, as obtained from a fifty candle power leucodescent lamp, and obtained good results. Daily exposures are given, of ten or twenty minutes' duration, with the lamp at a distance of six to twelve inches.

(*Ibidem*, April, 1913, xvii, No. 4.)

ON THE CURATIVE VALUE OF MERCURIAL INUNCTIONS IN THE TREATMENT OF SYPHILIS. XAVIER DE WATRASZEWSKI, p. 175.

Watraszewski discusses the relative merits of mercury administered by inunction, injection and by mouth. He believes inunctions are best, and advises a 33% ointment with resorbin base, or even better, with vasogen. Using 2.0 at first, he rarely exceeds 3.0. Thirty or forty inunctions are sufficient in most cases of syphilis. If the ointment has been properly applied, there remains absolutely no trace upon the skin, and no discoloration.

TECHNICAL SUPPLEMENT TO THE UROLOGIC AND CUTANEOUS REVIEW.

Abstracted by CHARLES GOOSMAN, M.D.

(April, 1913, i, No. 2.)

THE OVARIAN HORMONES IN THEIR RELATIONS TO VARIOUS SKIN DISEASES. A. DUTOIT, p. 159.

As a result of variations in the functional activities of the ovaries at puberty, pregnancy and the climacteric, there occur numerous skin diseases, which Dutoit would classify as secretion-dermatoses; and compare them with the drug rashes. He recalls in this connection the acne of the period of puberty, which frequently corresponds with iodine acne; while the so-called arsenical melanosis recalls to a certain degree chloasma uterinum. A long list is given of other skin diseases which are in part due to changes in the ovarian hormones. As a possible explanation, Dutoit cites some experiments that tend to show the importance of menstruation in eliminating the arsenic excess from the body.

HÆMANGIO-ENDOTHELIOMA TUBEROSUM MULTIPLEX AND LYMPHANGIO-ENDOTHELIOMA TUBEROSUM MULTIPLEX (LYMPHANGIOMA TUBEROSUM MULTIPLEX KAPOSI). EDMUND SAALFELD, p. 166.

Saalfeld differentiates between blood vascular and lymph vascular tumors of this rare type. One case of the former and two of the latter are put on record, with careful histologic descriptions and illustrations.

TECHNIQUE OF VENOUS INFUSION. HERMAN BOEHME, p. 206.

Boehme prefers infusion to injection, on account of greater simplicity. He

advises using nickle-plated steel needles, and describes a new fitting to connect the needle with the tube.

CONTRIBUTION TO THE STUDY OF GRANULOMA FAVICUM. CARLO VIGNOLO-LUTATI, p. 212.

Lutati gives the results of histologic studies of favus. In some cases he finds granulomatous structures in the corium, with giant cells, epithelioid and leucocytic cells. In one such granulomatous area he found spores of achorion. He believes the favus scar can be formed in two ways; by chronic folliculitis and perifolliculitis, and by granuloma formation in the corium.

ON THE THERAPEUTIC USE OF NORMAL HUMAN SERUM IN SKIN DISEASES. PAUL LINZER, p. 217.

Linzer has used human serum to treat very obstinate cases of urticaria, prurigo and eczema, with very good results. In dermatitis herpetiformis and pemphigus the results, while good, are not so permanent. The serum is given intravenously, except to children. In a severe case of herpes gestationis the serum from a non-pregnant woman had no effect, but one injection of serum from a pregnant woman was followed by rapid subsidence. Ten or twenty cubic centimetres of serum constitute a normal dose for adults.

RELAPSES OF SYPHILIS AND SALVARSAN. JOS. SELLEI, p. 220.

Sellei is convinced that neuro-relapses and other grave relapses are more frequent since salvarsan treatment has been instituted. Mercury does not act directly upon the treponema, in contrast to salvarsan, which we know possesses direct spirillotropic properties. It would be of interest, therefore, to know how many of those cases in which salvarsan had been used from the start, had grave or malignant returns of the disease; in other words, how one has succeeded in changing the general character of syphilis by salvarsan therapy. Sellei suggests that an energetic early treatment of syphilis may, in some cases, have a disturbing effect upon the development of antibodies and other defensive powers; so that a relapse will be influenced in a harmful way, and may assume a more serious form.

MERCURY AND SALVARSAN: REMARKS ON THE THERAPY OF SYPHILIS AND THE EFFECT OF THE CUSTOMARY ANTI-SYPHILITICS. ERNST FINGER, p. 129.

Finger believes that the theory of a direct parasitocidal action of mercury and salvarsan is not at all demonstrated. Practice and experiments seem much more to justify the opinion that the effect of these agents is that of a purely indirect "stimulating" influence, the protective forces of the organism being increased. He also believes that the character of action of mercury and salvarsan is alike in essentials.

After calling attention to the one hundred and forty-two deaths from salvarsan in three years, as compared with seventy fatal cases of mercurial injections in sixty years, Finger takes up in detail the untoward effects of salvarsan, denying the significance of bacterial proteids in the distilled water. In concluding, he advises the use of salvarsan, always in combination with mercurial treatment, in primary lesions with a negative Wassermann reaction. In the tertiary stage, also, it is valuable if one aims at a quick effect; but in the primary stage with a positive Wassermann, and in the early period of the secondary stage, salvarsan had better be omitted from the treatment, as it has not been shown to be any more effective than mercury alone.

(*Ibidem*, March, 1913, xvii, No. 3.)

ON THE PATHOGENESIS OF SALVARSAN FATALITIES. WILHELM WECHSELMANN, p. 117. (This article was continued through 5 numbers. The concluding installment appeared in July.)

After giving 2,500 injections of salvarsan, Wechsellmann believes it to be much less toxic than mercury. Any evil consequences observed are always due to some organic insufficiency, especially of the kidneys. Hypersensitiveness of the brain is not an important factor. After quoting Hogan and Fischer's work, showing that the blood contains no free water, but only hydration water, and that intravenous injections of salt solution are rapidly excreted because of their free water content, Wechsellmann states that under usual conditions, intravenous injections of salvarsan also are rapidly excreted, so that elimination may be complete in 5 or 6 hours. When the kidneys are not functioning properly, this elimination may progress much more slowly and the retained salvarsan be converted into the more dangerous arsenoxide. In the case of the more easily decomposed neosalvarsan, this probably occurs more often than with salvarsan.

Salvarsan fatalities do not resemble arsenic fatalities, but they do have a close resemblance to poisoning by carbon dioxide. Among other things, this produces a capillary congestion of the brain. It is not encephalitis hæmorrhagica, but the enormous distention of the vessels which is the constant finding in death from salvarsan.

Disturbance of salvarsan elimination takes place only in the presence of previously damaged kidneys, and this damage may be due to the earlier administration of mercury, without betraying any evidences on urinalysis. Practically all salvarsan fatalities occurring in strong, healthy looking patients disclose the fatal combination of energetic mercurial treatment, followed by the intravenous dose of salvarsan. A normal kidney is never damaged by salvarsan, and sometimes, even in the presence of slight renal insufficiency, the first dose may be tolerated, but the second be too great a burden.

After the first injection, which, for the purpose of testing the patient's tolerance, should not be in excess of 0.1 or 0.2 gramme, one must always pay strict attention to the renal function. The estimation of quantity and specific gravity of urine, determined for several days, usually suffices. The conclusion must not be based on tests made immediately after injection, but judgment postponed until the second or third day. With subcutaneous and intramuscular injections, the cerebral type of fatality has not been observed, because of the smaller amount of salvarsan in the blood.

In conclusion the following precautions are advised: 1. The most exact technique. 2. A dose of the drug, carefully adapted to the individual case. 3. Careful observation of the urinary secretion, particularly when the combined treatment is employed. 4. The conjoint use of salvarsan with heavy mercurial treatment is dangerous. If one will use the combined treatment, then give mercury very carefully, many days after the last salvarsan injection but never reverse this rule. 5. Make a full investigation of the cause of every general reaction or rise of temperature, following the use of salvarsan.

(*Ibidem*, May, 1913,, xvii, No. 5.)

ELECTRICAL OPERATIVE TREATMENTS FOR DISEASES OF THE SKIN AND MUCOUS MEMBRANES. W. KNOWSLEY SIBLEY, p. 248.

The electrical treatments are divided into four types: electrolysis, ionization, high frequency currents and X-rays. Electrolysis is useful in the treatment of nævi, moles, hypertrichosis, warts, sebaceous and other cysts, fibromata and ganglion. In treating a small cyst, not larger than a pea or bean, a negative

aluminum needle is inserted into its centre, and a current of 5 milliamperes continued for one or two minutes. In a few days the cyst will shrink up, and not recur. For larger cysts, a few drops of normal saline solution are injected into the centre and both the positive and negative needles (of copper) are inserted into the cysts by separate openings, but fairly close together. The needles, of course, must not touch each other. A current of 2 to 5 milliamperes is sent through for 3 to 5 minutes, according to the size of the cyst. In about a week the needle punctures will have enlarged sufficiently to permit the discharge of the necrotic cyst wall. This same method of procedure is followed in molluscum contagiosum.

Ionization of zinc salts will cure the various forms of tuberculous skin diseases, especially the non-ulcerated form of lupus vulgaris. Warts are cured by the introduction of magnesium salts, and chlorine ions will often absorb and remove scar tissue.

High frequency currents are curative for local pruritic conditions, especially pruritus ani or vulvæ. This form of electric treatment is also useful in chronic eczema, seborrhœic dermatitis, alopecia, acne vulgaris and rosacea, pemphigus, lupus erythematosus, chronic ulcers, etc.

X-rays, correctly applied, yield good results in skin cancer, rodent ulcer, varicose and tuberculous ulcers, including those of lupus vulgaris. Tuberculous glands, mycosis fungoides, eczema, psoriasis, lichen planus, etc., are very favorably influenced.

Sibley discusses in detail the dosage of X-rays in the treatment of skin diseases. He believes there is no doubt that the tendency, at the present time is to give smaller doses at rather more frequent intervals than was formerly the case.

REMARKS ON SYPHILIS OF AN UNUSUALLY SEVERE TYPE.

CHARLES F. MARSHALL, p. 252.

Marshall limits the term malignant syphilis to cases of rapidly developing ulceration occurring within a few months of infection. As to the cause of malignancy, it is not settled whether the constitution of the patient, or the unusual virulence of the organism is more to blame. The treatment should be tonic and stimulating. Mercury is contraindicated during the active period of the disease, and should be given with caution during the convalescent period. Local treatment of the ulcers is essential. He does not mention any personal experience with salvarsan in this condition.

THE TRANSPLANTATION OF RIB CARTILAGE INTO PEDUNCULATED SKIN FLAPS. AN EXPERIMENTAL STUDY.

JOHN STAIGE DAVIS, p. 233.

Experimenting on dogs, Davis succeeded in transplanting living costal cartilage into freshly made skin flaps. After 4 months the cartilage was still properly nourished, and showed little, if any shrinking, and Davis believes it will continue to act as a support as long as needed. He has used a rib cartilage transplant in a case of saddle nose, with good results, maintained now for 2 years.

CASE OF SYPHILIS OF THE CHOROID AND RETINA; WASSERMANN NEGATIVE.

J. H. WOODWARD, p. 237.

Woodward reports in detail a case in which 3 Wassermann tests, during a period of one year, were negative. With large doses of potassium iodide, the case finally cleared up. This case is cited as evidence that a negative Wassermann is untrustworthy and misleading, in some cases.

*(Ibidem, June, 1913, xvii, No. 6.)*ARTERIOSCLEROSIS AND DISEASES OF THE SKIN. LOUIS FAUGERES
BISHOP, p. 294.

Bishop cites several cases of chronic eczema that cleared up while under treatment for an associated arteriosclerosis.

Cutaneous angiomata he believes to be evidence of some form of well marked arterial degeneration. Raynaud's disease is also discussed.

REPORT OF A CASE OF SYPHILIS IN THE TERTIARY PHASE, COMPLICATED BY A PERSISTENT GLYCOSURIA, SUCCESSFULLY TREATED WITH NEOSALVARSAN. SAMUEL AXILBUND, p. 310.

A case of seemingly typical diabetes mellitus, combined with several ulcers over the tibia, was treated with 2 doses of neosalvarsan and mixed treatment. The glycosuria disappeared within 2 weeks, and Axilbund believes it was due to a gumma in the pancreas.

(Ibidem, July, 1913, i, No. 3.)

Abstracted by R. C. JAMIESON, M.D.

THE PRESENT STATUS OF THE SALVARSAN THERAPY OF SYPHILIS. WILHELM WECHSELMANN, p. 251.

This article by Wechselmann refutes some of the statements made by Nobl explaining the reasons for some of the unfavorable reports concerning the use of salvarsan.

He states that the action of the drug in mercury resisting, malignant lues is absolutely certain and that many injections are often necessary, as well as increased dosage. He has obtained his best and most lasting results by using the subcutaneous method instead of the intravenous and believes salvarsan to be superior to mercury in syphilis of the nervous system.

In most cases of tabes he has arrested the progress of the disease and now advises in all cases a salvarsan treatment suited to the patient's condition. Even intralumbal injections should be used in the beginning of paralysis.

He considers the untoward effects following the administration of salvarsan to be due to faulty technique rather than to the drug itself, especially, in intravenous injections, to what he terms the "water-error," i.e., using distilled water in which germ vegetation has developed. He found that distilled water allowed to stand open for even a very few minutes caused a late febrile reaction.

Neuro-recurrences he thinks due to "water-error" and insufficient dosage, while in twenty-five thousand injections, no injury has been done to the optic nerve. Fatalities following intravenous injections are due, aside from faulty technique, to idiosyncrasies and not to arsenical poisoning, the majority of deaths being due to a retention-toxicosis resembling uræmia. He also attributes fatalities to the combination treatment.

He feels convinced that continued salvarsan treatment will accomplish all that a combined treatment would. Recurrences are more rare and more mild than after mercury, prognosis being very favorable during the first two years and absolutely so during the first year. He considers a syphilitic cured if he has no symptoms of skin, mucous membrane or internal organs, a persistent negative Wassermann and unaltered spinal fluid.

FORERUNNERS OF X-RAY CANCER. G. NOBL, p. 235.

Nobl cites a number of cases in which malignancy followed X-ray treatment at varying intervals. Cases of hypertrichosis, prurigo, dermatitis in physicians

using the ray, etc., are reported, but no exact data is given as to the length of treatment or dosage. It would appear that most of the cases developed following the application of the ray in its first years of use, being used either carelessly or incompetently enough to produce different degrees of dermatitis at the time. The malignancy developed from one to nine years after treatment.

He warns that any ulcerations or granulating surfaces remaining after healing of an X-ray dermatitis should be regarded with suspicion as the beginning of an atypical proliferative process.

RHINOPHYMA, A HISTOLOGICAL STUDY: ALSO A CONTRIBUTION TO THE QUESTION OF THE POST-FETAL SEBACEOUS GLAND AND HAIR FORMATION. J. KYRLE, p. 276.

This article is a most complete study of the histology of this condition, too extensive for comprehensive abstract. He concludes from the sections studied, that there is a post-fetal development of sebaceous glandular material, but he is not positive regarding the hair new-formation.

DERMATITIS ATROPHICANS: WITH REPORTS OF A CASE SHOWING FIBROID FORMATION, L. W. KETRON, p. 286.

Ketron gives a complete history and histological report of a case of dermatitis atrophicans. Nothing definite is given with regard to the aetiology of this condition. The case is of great interest on account of the typical fibrous nodules,—one of the “terminal products” of acrodermatitis—which his patient presented.

FURTHER EXPERIENCES CONCERNING THE VALUE OF THE WASSERMANN REACTION IN THE DIAGNOSIS OF INTERNAL DISEASES. REINHOLD LEDERMANN, p. 295.

This article deals with internal diagnosis, especially in cases that would not have been diagnosed properly without the Wassermann reaction.

JOURNAL OF THE INDIANA STATE MEDICAL ASSOCIATION.

(May 15, 1913, vi, No. 5.)

Abstracted by CHARLES GOOSMAN, M.D.

A SIMPLE METHOD FOR THE INTRAVENOUS ADMINISTRATION OF NEOSALVARSAN. JOHN R. THRASHER AND BERNARD ERDMAN, p. 244.

The authors have given 150 intravenous injections of neosalvarsan, in each case using only 10 cc. of freshly distilled water. The solution was made in the glass syringe used for injecting, and the needle attached with $1\frac{1}{2}$ inch of pure gum tubing. After inserting the needle, a little blood was aspirated into the syringe, and then the injection slowly performed.

They find the average reaction to be less than that following the use of 75 to 100 cc. by the gravity method.

(*Ibidem*, June 15, 1913, vi, No. 6.)

SPOROTRICHOSIS; REPORT OF A CASE. B. W. RHAMY AND W. W. CAREY, p. 274.

The authors report a case of the gummatous type of sporotrichosis, of 8 years' duration. Most of the lesions were on the legs and thighs. Fever was

absent, but malaise and extreme weakness accompanied the outbreak of successive crops of lesions. The diagnosis was made by cultivation of the organism, Cole, of Cleveland, confirming it. A differential blood count showed 6% eosinophilia. Wassermann and tuberculin tests were negative.

Treatment with autogenous vaccine was tried, but without startling results. Potassium iodide is being used.

(*Ibidem*, July 15, 1913, vi. No. 7.)

A CASE OF PEMPHIGUS VULGARIS, PROBABLY DUE TO RENAL INSUFFICIENCY. G. W. McCaskey, p. 309.

In a case of pemphigus, with a history of an acute attack of Bright's disease 12 years previously, McCaskey found distinct renal insufficiency, the tests being phenolsulphonphthalein, and the estimation of urea and chloride. The main factor in the treatment was a careful adjustment of the proteid and chloride content of the food to the lowered functional capacity of the kidneys. The patient left the hospital before she was free from bullæ, although greatly improved. Her present condition is unknown.

PELLAGRA. J. K. Pollock, p. 313.

Pollock reviews the subject of pellagra, and feels that the spoiled maize theory should not be abandoned until some more definite cause can be assigned.

(*Ibidem*, August 15, 1913, vi, No. 8.)

Abstracted by CHARLES T. SHARPE, M.D.

THE LUETIN TEST IN SYPHILIS. C. A. Beall, p. 344.

On October 11, 1912, Dr. Beall reported to the State Medical Association of Indianapolis his findings in the luetin test of Noguchi; first describing the test and reviewing the reaction as described by Dr. Noguchi as follows:

Luetin consists essentially of an emulsion made by grinding up cultures of *treponema pallidum*, grown in fluid and solid media, heating to 60°C. for one hour and adding 0.5 per cent. carbolic acid. The control consists of an uninoculated carbolyzed emulsion of the same media.

The test is made by injecting in one arm, intradermically, with a fine needle, 0.05 cc. of the luetin. The control is used in the opposite arm. The skin is to be made sterile before the injections.

Description of Reaction (from Noguchi). Negative Reaction. In the majority of normal persons there appears, after 24 hours, a very small erythematous area at and around the point of injection. No pain or itching sensation is experienced. This reaction gradually recedes within 48 hours and leaves no induration. In certain individuals, the reaction may reach a stage of small papule formation after 24 to 48 hours, after which and within 72 hours, it commences to subside. No induration is left behind, although occasionally slight yellowish pigmentation may result from mild ecchymosis.

Positive Reaction. According to the manner and intensity with which the skin of syphilitics responds to the introduction of the luetin, one may distinguish the following varieties of effects:

A. Papular Form. A large, raised, reddish, indurated papule makes its appearance in 24 to 48 hours. The papule may be surrounded by a diffuse zone of redness and show marked telangiectasis. The dimensions and the degree of induration slowly increase during the following three or four days, after which the inflammatory processes begin to recede. The color of the papule gradually be-

comes dark bluish-red. The induration disappears within one week, except in certain instances, in which a trace of the reaction may persist for a longer period.

B. Pustular Form. The beginning and course of this reaction resemble the papular form until about the fourth or fifth day, when the inflammatory processes commence to progress. The surface of the indurated, round papule becomes mildly œdematous, and multiple miliary vesicles occasionally form. At the same time, a beginning central softening of the papule can be seen. Within the next 24 hours, the papule changes into a vesicle, filled at first with a semi-opaque serum that later becomes definitely purulent. Soon after this, the pustule ruptures spontaneously or after slight friction or pressure. The margin of the broken pustule remains indurated, while the defect caused by the escape of the pustules content becomes quickly covered by a crust that falls off within a few days. About this time the induration usually disappears, leaving almost no scar after healing. There is a wide range of variation in the degree of intensity of the reaction described in different cases, as some show rather small pustules, while in others the pustule is much larger.

C. Torpid Form. In rare instances, the injection sites fade away to almost invisible points within three or four days, so that they may be passed over as negative reactions. But sometimes these spots suddenly light up again after ten days or even longer and progress to small pustular formation. The course of this pustule is similar to that described for the preceding form. In eight cases, clinically syphilitic, of whom four showed gummata of the skin, two, perforated nasal septum, one, perforated palate, and one rhinitis, the test was positive.

In 68 inmates of the Indiana School for Feeble Minded Youths, who showed no clinical evidence of syphilis, the following results were obtained. The Wassermann test was positive in 12 cases, of whom 5 showed a positive luetin test; 6 a negative luetin test and one in whom the first and second luetin test did not agree.

The Wassermann test was weak or faint in 16 cases, of whom one showed a positive luetin test; 13 a negative luetin test and 2 in whom first and second luetin tests did not agree.

The Wassermann test was negative in 40 cases, of whom 5 showed a positive luetin test; 28 a negative luetin test and 7 in whom the first and second luetin tests did not agree.

In 67 cases in which 2 luetin tests were made at intervals of 3 months, it was found that in 11 cases the first and second tests agreed positively; in 41 cases they agreed negatively and in 15 the first and second tests did not agree.

When it was found difficult to decide whether a test was positive or negative it was called negative.

Dr. Beall's conclusions are: Beyond any doubt, the present luetin test contains elements of a specific reaction. In doubtful cases the present preparation does not give results which are constant enough on which to base a diagnosis.

He states that the preparation of a more active luetin has already been undertaken at the Rockefeller Institute.

TREATMENT OF SYPHILIS. WILLIAM S. EHRICH, p. 315.

The author advises examination for the *treponema pallidum* by means of staining with india ink when one has not a dark field microscope and believes that it will be more generally useful than the Wassermann reaction, owing to the extreme delicacy of the latter and the special training requisite for its performance.

He urges prompt and energetic treatment to guard against the rapid spread of infection and considers inunctions of mercurial ointment a most reliable and satisfactory method of administration, recommending a fifty per cent. by weight preparation, made with a vegetable or animal fat, of which lard is probably the best.

The insoluble preparations are alluded to as the method of choice par excel-

lence, because the patient gets a known amount of mercury which does not pass unacted upon through the alimentary tract; it is not thrown immediately into the circulation, but must be acted upon by the body fluids and consequently there is a continuous absorption. The injections are given twice weekly, are practically painless, are cleanly, and entail more secrecy for the patient. Ehrich uses equal parts by weight of bidistilled mercury and lanolin. Suspension in oil is a painful method.

Salvarsan should be given at once if visible lesions exist, to destroy the spirochetes and their toxins, to protect the patient and safeguard those with whom the patient comes in contact. If there are contraindications for the use of salvarsan, mercury must be given. Again, if the patient is resistant to mercury, or cannot tolerate it, salvarsan should be given, contraindications or no contraindications. In any event mercury should follow the administration of salvarsan.

An interesting discussion followed these two papers, which in the main, bore out the statements of the author.

SOUTHERN MEDICAL JOURNAL.

(July, 1913, vi, No. 7.)

Abstracted by CHARLES GOOSMAN, M.D.

PELLAGRA IN THE CANAL ZONE: ITS ÆTIOLOGY AND TREATMENT. W. E. DEEKS, p. 438.

Deeks reports the detailed histories of 30 cases. He believes that pellagra is due to an autointoxication caused by the action of some ferment or organism or an excessive carbohydrate diet, and the exclusion of green vegetables and fruits. During warm weather it is worse because of lessened metabolic activity. In some of Deeks' cases, no history of the use of corn could be obtained; all, however, were consumers of sweet and starchy foods to the practical exclusion of proteids, green vegetables and fresh fruits.

The treatment recommended during the period of gastric disturbance consists of a diet limited absolutely to fresh fruit juice (preferably orange juice), meat broths and milk. When nausea and vomiting are relieved, eggs, meats and green vegetables are added to the diet. Dilute nitric acid, 15 to 30 drops in three-fourths of a tumbler of water before meals, is given from the beginning and continued for a long time.

Very good results are claimed.

CANADIAN MEDICAL ASSOCIATION JOURNAL.

(May, 1913, iii, No. 5.)

Abstracted by CHARLES GOOSMAN, M.D.

SALVARSAN IN THE TREATMENT OF SYPHILITIC DISEASES OF THE CENTRAL NERVOUS SYSTEM. ROBERT G. ARMOUR, p. 364.

The salvarsan treatment for tabes has been most satisfactory, in early cases. In general paresis the results are not good; although in one case that received thirteen full doses in three months, and seven additional doses after an interval, the symptoms improved, the positive Wassermann reactions of the blood and cerebrospinal fluid became negative, and the excess of globulin disappeared.

Armour has seen no injurious action on the special senses by salvarsan.

ANNALS OF SURGERY.

(June, 1913, lvii, No. 6.)

Abstracted by CHARLES GOOSMAN, M.D.

PRIMARY TUBERCULOSIS OF THE GLANS PENIS. EDMUND A. BABLER.
p. 894.

Babler reports a case of primary tuberculosis of the glans penis, in a man 72 years old. In six months it had formed a smooth, oval, hard nodule about the size of a filbert. The overlying skin was intact. Subjective symptoms were absent. Malignant tumor was suspected, but the biopsy showed tuberculosis. The growth was then excised.

INDIANAPOLIS MEDICAL JOURNAL.

(February, 1913, xvi, No. 2.)

Abstracted by CHARLES GOOSMAN, M.D.

THE USES OF SULPHUR POWDER IN DISEASES OF THE SKIN. A. W.
BRAYTON, p. 44.

In acne vulgaris, Brayton advises white lotion at night, and precipitated sulphur, added to the favorite face powder in the proportion of one to four, for use during the day. An ointment of one drachm of sulphur to one ounce of cold cream is also useful in acne, and by the addition of 30 grains of salicylic acid, affords an excellent treatment for seborrhœic dermatitis. In scabies, as well as eczema cruris, sulphur powder is recommended, instead of ointments.

(*Ibidem*, May, 1913, xvi, No. 5.)

NEOSALVARSAN AND SALVARSAN. HARVEY A. MOORE, p. 184.

Moore prefers neosalvarsan, believing it to be better tolerated than salvarsan. He describes his apparatus for intravenous injection and reports a case of leg ulcer that was resistant to mercury treatment, but healed rapidly under salvarsan.

INTERSTATE MEDICAL JOURNAL.

(July, 1913, xx, No. 7.)

Abstracted by CHARLES GOOSMAN, M.D.

NEW VIEWS OF THE SYPHILITIC PARASITE. AUGUSTUS K. DETWILER.
p. 660.

Detwiler discusses the supposed life history of *treponema pallidum*, as described by Siegel in his *cytryctes luis*, and by Ross as *lymphocytozoon pallida*.

(*Ibidem*, May, 1913, xx, No. 5.)

SOME PROBLEMS IN THE ETIOLOGY OF PELLAGRA. EDWARD J.
WOOD, p. 437.

Wood considers the corn theory palpably insufficient. Cotton-seed oil and other semi-drying fats are also excluded as etiologic factors.

There are a number of reasons for suspecting an animal parasite. In the first

place, there are the points of similarity between the pathological changes of pellagra and that group of diseases which includes syphilis, trypanosomiasis and kala-azar, such as increase of mononuclear elements of the blood and perivascular infiltration of the tissues. Then the distribution of the disease, along swiftly flowing streams, the favorite breeding place of the *Simulium*.

It is difficult to explain why women are so much more frequently attacked than men. Neither is it plain why negroes should be proportionately less affected, unless it is because they have a smaller percentage of hookworm infection, to lower their general resistance.

AMERICAN JOURNAL OF SURGERY.

(May, 1913, xxvii, No. 5.)

Abstracted by CHARLES GOOSMAN, M.D.

THE RADIOGRAPHIC DIAGNOSIS OF SYPHILIS, TUBERCULOSIS, TUMORS AND OSTEOMYELITIS OF THE LONG BONES. WALTER M. BRICKNER, p. 165.

Brickner believes that the radiographic features of bone syphilis are so characteristic, that in most cases the diagnosis can be made from the X-ray plate alone, without, or in the face of, clinical appearances and blood reaction.

The most constant and most distinctive feature of bone syphilis is thickening of the periosteum. Next in importance is thickening of the bony tissue, especially the cortex. A third possibility is gummatous destruction of bone.

Syphilitic periostitis must be differentiated from periosteal sarcoma. In the latter the outline fades gradually, while a sharp outline is found in periostitis.

Syphilitic osteitis produces sclerosis of bone, with correspondingly denser shadow and loss of bone structure. This may be limited to the cortical layer, or involve the medulla as well. Gummatous destruction of bone can be differentiated from bone absorption caused by tumor or bone sclerosis surrounding the gumma. Sequestrum formation is unusual in syphilis. The article is well illustrated.

ON THE TREATMENT OF EPITHELIOMA. A. RAVOGLI, p. 173.

Ravogli believes in the parasitic origin of cancer. In its treatment, therefore, he considers a parasiticide indicated. The following is his favorite application: formalin, 2 parts; lysol, 2 parts; and ferric chloride solution, 1 part. This must be mixed at the time of using.

To prepare the epitheliomatous surface, it is scraped under cocaine anæsthesia. Ethyl chloride will not do, because it is hard to know when to stop curretting the frozen tissue. After all nodules have been removed, cocaine is again applied, and after drying the surface, a tampon saturated with the formalin is held against the area for about 5 minutes. Washing with alcohol follows. Equal parts of diachylon ointment and ichthyol forms a good dressing.

THERAPEUTIC GAZETTE.

(July 15, 1913, xxix, No. 7.)

Abstracted by CHARLES GOOSMAN, M.D.

NEUROSES OF THE SKIN. WILLIAM S. GOTTHEIL, p. 460.

True neuroses of the skin are comparatively few, and under careful study their number is constantly decreasing. In the present state of our knowledge,

the following can be cited as true neuroses: hyperidrosis, anhidrosis, bromidrosis, chromidrosis, zoster, glossy skin and Raynaud's disease. Other diseases which are evidently connected in some way with the nervous system are alopecia areata, leucoderma, macular atrophy, pemphigus, hydroa, leprosy, perforating ulcer of the foot, certain forms of eczema, etc.

Gottheil takes up the individual diseases, discussing their causes, symptoms and treatment.

Hyperæsthesia and anæsthesia are due to changes in the central nervous system, such as hysteria, or in the peripheral nerves.

Meralgia paræsthetica will probably be found to be secondary to neuritis, rheumatism or alcoholism, and not a primary neurosis of the skin.

Dermatalgia, in rare cases, appears without ascertainable cause. In these cases, Gottheil has had the best results from the high tension spark, applied by means of a glass vacuum electrode, but is not prepared to say that it was not due to suggestion.

In pruritus, the best application is carbolic acid in oily solution; this can be used as strong as 25% over quite large areas, without fear. The X-ray has most often failed. In obstinate local pruritus, painting with pure phenol, or with 8% silver nitrate solution may be useful.

Hyperidrosis is probably due to some affection of the sympathetic nervous system. Internal remedies produce no lasting improvement. The application of 1 to 5 per cent. formalin solution, 1 to 10 per cent. salicylic ointment, or diachylon ointment has proved useful. For treating the feet, a dusting powder containing 3 to 10 per cent. salicylic acid is more agreeable than ointments, and just as efficacious.

For zoster, the local treatment is a dusting powder, containing a small amount of cocaine or anæsthesin, together with as tight a bandage dressing as the patient can conveniently bear. Internally, the salicylates are of distinct benefit, and should be kept up not only until the skin lesions have healed, but till after all the neuritis symptoms have disappeared.

Alopecia areata Gottheil believes to be of two types, clinically indistinguishable. The first is a tropho-neurosis, while the other type is due to parasites. In the treatment, besides repeated applications of phenol, the high tension spark is used.

LANCET CLINIC.

(July 5, 1913, ex, No. 1.)

Abstracted by CHARLES GOOSMAN, M.D.

INJECTION NECROSES IN SYPHILIS. M. L. HEIDINGSFELD, p. 6.

Heidingsfeld describes 3 cases of necrosis. One followed a deep injection of bichloride. The other two were due to intramuscular and intravenous injections of salvarsan, or what was intended to be an intravenous injection.

Heidingsfeld believes that injections of bichloride are an unwarranted therapeutic measure. He also condemns dissecting the vein for injecting or for obtaining blood for Wassermann tests, except in young individuals, and occasionally in women.

DERMATITIS HERPETIFORMIS, WITH REPORT OF CASES. C. J. BROEMAN, p. 10.

Broeman reports 3 cases, one in a girl 5 years old. In this case, the eruption followed 2 weeks after vaccination, starting as small vesicles around the vaccination scar. One of the other cases seemed to have a distinct neuritic origin.

PITTSBURGH MEDICAL JOURNAL.

(April, 1913, i, No. 1.)

Abstracted by CHARLES GOOSMAN, M.D.

THE TREATMENT OF DANDRUFF. JOHN G. BURKE, p. 16.

Burke follows the classification of Sabouraud. Dandruff is the main symptom of pityriasis simplex and pityriasis steatodes, neither of which have anything to do with the sebaceous glands or with seborrhœa. An added infection, however, with the microbacillus of Sabouraud (also called the acne bacillus of Unna) may produce seborrhœic dermatitis.

Although pityriasis simplex does not cause baldness, it is only a question of time until it is transformed into pityriasis steatodes, or even seborrhœic dermatitis, both of which cause the hair to fall out. It is best, therefore, to begin treatment as early as possible, but no success will follow the mere giving of a prescription, unless accompanied by advice as to the care of the scalp. The scalp should be washed every 3 or 4 weeks; too frequent washing makes the hair dry and brittle. Green soap is to be preferred. The comb and brush should be scalded or baked at least every time the hair is washed.

The remedy of choice in the treatment of dandruff is sulphur, and the most satisfactory preparation is a sulphur paint, containing precipitated sulphur 10%, and glycerine 5%, in alcohol. This is to be painted on the scalp with a small brush, the hair being parted in different places, making daily applications over a period of 2 weeks, during which the scalp is not washed, causing a hyperæmia and better nutrition of the scalp. A favorite application at this time consists of salicylic acid 1% and tr. cantharides 8% in alcohol. If the hair is dry, the alcohol is replaced by castor oil or oil of expressed almonds. A 10% sulphur cream is used twice a week during this treatment, and if, after 4 or 5 weeks, the scalp still shows a tendency to form dandruff, it will be necessary to start again with the sulphur paint.

Massaging and shampooing are of no value, but the high frequency current sometimes benefits the hair.

JOURNAL-RECORD OF MEDICINE.

(April, 1913, lx, No. 1.)

Abstracted by CHARLES GOOSMAN, M.D.

SYPHILIS FROM THE STANDPOINT OF THE SYPHILITIC AND THE GENERAL PUBLIC. COSBY SWANSON, p. 1.

Swanson believes that the discussion of syphilis should not be prohibited by false modesty. All cases should be reported. Prostitutes should be regularly examined by competent physicians, and should be taught practical methods of recognizing infectious syphilitic lesions. Early systematic treatment should be enforced in all syphilitics until the danger of infecting others has passed. All irresponsible persons should be isolated until properly treated. The public should receive more general instruction as to adequate prophylactic methods.

BOOK REVIEW.

DISEASES OF THE SKIN. Including the Exanthemata, for use of General Practitioners and advanced Students. By FREDERICK M. DEARBORN, A.B., M.D., Professor of Dermatology in the New York Homœopathic Medical College and Flower Hospital; Clinical Professor of Dermatology in the New York College and Hospital for Women; Dermatologist to the Metropolitan Hospital (Department of Public Charities, New York City), to the Flower Hospital, to the Hahnemann Hospital and the Laura Franklin Free Hospital for Children; Consulting Dermatologist to the Hospital of the New York Medical College and Hospital for Women, to the Out-patient Department of the Flower Hospital, to the St. Mary's Hospital (Passaic, N. J.), to the Jamaica Hospital (Jamaica, N. Y.), and to the Yonkers Homœopathic Hospital (Yonkers, N. Y.). With 230 Illustrations in the text. 551 large 8vo pages. Cloth, \$5.00 *net*. Postage, 30 cents. Philadelphia, Boericke & Tafel, 1913.

The book now before us for review is well printed from clear type. The proofreading is well done. We have noted only three typographical errors. One is on page 17, line 17 from the bottom, where *shart* should be *shaft*; one on page 41, line 19 from the bottom, where *dermatitic* should be *dermatitis*; and in another place *Whiphouse* probably should be *Whitehouse*.

It is most liberally illustrated with half-tones from photographs, there being 230 illustrations in its 530 pages. They would be far more useful as illustrating the text if the photographs had been taken with greater sharpness of detail. Those from the collection of Dr. Howard Fox are good, as his photographs always are.

The various diseases are clearly and concisely described in their usual and typical form. The pathology of each disease is dismissed in a few lines and almost entirely unillustrated. Special stress is placed on treatment, so that therapeutics is the strong part of the book. Special attention is given to the external treatment, and all the most modern methods are described, such as the use of X-rays, radium, carbonic acid snow, high frequency currents and vaccines. Directions as to diet are given and such drugs as potassium, quinine, thyroid extract, mercury and other standard remedies are recommended in the usually accepted dosage. At the end of each section on treatment is placed a line or two of the abbreviated names of homœopathic drugs that may be "studied" or are "indicated."

The vocabulary is full, hardly any of the recently described dermatoses being omitted. The description of many of the latter is very meagre. To us as physicians, the book has special interest as setting forth the best practice of a sect in medicine. In the section on general treatment, eight pages are given to an alphabetical list of drugs and their potencies that may be "indicated" in skin diseases. They number about two hundred and thirty-four. Surely our homœopathic brethren are rich in resources! In the treatment of eczema we have the liberal allowance of seventy-seven drugs from which to choose; drugs for every phase, from erythematous to gangrenous, whether acute or chronic, localized or generalized, by day or by night, in dampness or dryness. For the *internal treatment of ringworm* there are 14 drugs, for scabies 5, for corns 4, for warts 16. We can but read and wonder!

A novel feature of the book is the number of pictures of cases with titles indicating the means of cure. They are not convincing because the author does not appreciate that when two or more remedies are used at the same time, it is impossible to say with accuracy which one does the good. If acne was cured by X-rays and sulphur "3X"; sycosis by X-rays, ammoniate of mercury ointment

and sulphur "3X"; prurigo by hygiene and sulphur "6X," it is no proof that the drug had any part in the result. That erythema multiforme recovered in three weeks while taking chloral "3X"; pityriasis rosea in six weeks while taking iron phosphate "3X," and zoster while taking bryonia "3X," we may believe, or not believe that the drug had anything to do with the cure.

The book is of value as containing the experience of an active, well trained, observing dermatologist. Unlike most authors, this one has given scarcely any credit to other workers in dermatology, nor references to other writers to support his opinions. These omissions seem to us to detract from the scholarly character of the book. It is, however, a safe guide to the treatment of diseases of the skin, if one does not pin too much faith to the efficacy of the so-called homœopathic remedies. It is easily the best book on its subject that has been written by a disciple of Hahnemann, and deserves the success that it will surely achieve.

G. T. J.

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(Books marked with an asterisk will be reviewed.)

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ERRATUM.

The name of the Associate Editor, DR. FRED WISE, was inadvertently omitted from the Title Page of Volume xxxi of THE JOURNAL.

ANNOUNCEMENT.

A NEW DEPARTMENT.

A New Department—HISTOPATHOLOGY—has its birth in this issue. It will consist of a series of illustrated articles by DR. JOHN A. FORDYCE. Especial pains are being taken by the engravers and printers to do full justice to the excellent microphotographs. When the series has been completed every subscriber to THE JOURNAL will possess an ATLAS OF CUTANEOUS HISTOPATHOLOGY of great value.

We feel that it is unnecessary to add anything more, for Dr. Fordyce's ability in histopathology is well known, and the text, which is concise and unusually clear, and the illustrations will speak for themselves.

NOTICE.

On account of the enormous amount of material on hand it will be impossible to have the various Departments of THE JOURNAL represented each month. Two or more Original Contributions, at least one Society Transaction, at least one Clinical Report and a number of Abstracts will be published each month. Installments of Histopathology, of Dermatological Therapeutics and of another Department, which, is now in the course of preparation, will appear about every second month.

THE JOURNAL OF CUTANEOUS DISEASES

VOL. XXXII

FEBRUARY, 1914

NO. 2

EDITORIAL.

CHANGING VIEWS ON PELLAGRA.

WHEN the unusual frequency of pellagra in various sections of this country awakened general interest in the disease, an almost universal opinion prevailed that maize was the cause of the disease. The investigation was directed at the element in corn products which might be held responsible. In the South many persons who had eaten corn in all forms became abstinent so far as this food was concerned.

The prevalence of the disease outside of larger cities and mostly among those living in country districts caused some revision of the earlier views, still, however, entertained among those who studied pellagra at first hand in the asylums for the insane. Perhaps the historical picture of pellagra had much to do with professional opinion. Barring a few of the French observers, the almost unanimous opinion of those who had worked among pellagrins for over two hundred years had been in favor of diseased or immature grain as the causal factor.

The experience with the disease in the United States has thrown several new lights on the question. It is established that the removal of pellagrins to greater altitudes and a cooler climate will ameliorate their condition and often will cure them. The study of the epidemiology of the disease around Spartanburg, North Carolina, has pointed conclusively to environmental influences which provoke a larger incidence among those who are constantly in the house (as the women and children); more than this, the cases are grouped in districts and the disease has seemed to travel along certain topographical lines. Season has much to do with the frequency of pellagra, as it develops more in summer than in winter; but, whatever the cause may be, the cases which develop at any season go to argue that the cause does not hibernate.

The zeistic theory of pellagra is not yet out of the debate, for there is still the open question as to where the starting point of pellagra may be in the human being.

Sambon has strongly advanced the *Simulium* as the transmitter of pellagra, but the breed is unknown in many sections of America where pellagra is present and on the increase. This suggests that Sambon may be right, but that the sand fly may be only one of the agents of transmission and that other insects may serve the same end.

The cutaneous evidences of pellagra are consistently progressive in their organized method of appearance and argue some profound systemic, toxic cause. The associated membrane involvement, moving on to the meninges, argues more than a simple inflammation.

Meantime experimental research has developed in the matter of the possible contagiousness of pellagra, beginning with the theory that the disease is due to an organism. The most decisive work so far published has been presented by W. H. Harris, from the Department of Pathology at Tulane. He has employed a filtered virus derived from the human subject and inoculated in monkeys. The virus has been successively recovered from two monkeys and transmitted to the third monkey, each of the three developing all of the intestinal, dermatological and nerve evidences of pellagra, without any especial attention having been paid to the diet.

The organism is so far elusive and the element of error constant, for monkeys are prone to dermatological affections, often misleading, as suggested by the observations of the Illinois Commission, which at one time believed some of their monkeys were developing pellagra. The whole subject is one of keen interest, and the dermatologist especially has the opportunity to bring about some of the evolution of ideas in the disease.

The therapy in pellagra still remains chaotic, with salvarsan vaunted, arsenic in common use, a large number of other remedies suggested, and with a customary prognosis of a large mortality. The wider the disease areas grow, however, the more mild the disease appears, and, therefore, the more persons are cured. The likelihood of any specific treatment will be uncertain until the causal factor is apprehended, and it is to be hoped that American genius may find the way to add this discovery to its many achievements in recent years.

ISADORE DYER.

INTERMITTENT ATTACKS OF DERMATITIS IN A
HOUSEHOLD, PROBABLY DUE TO ARSENIC.*

By GEORGE F. HARDING, M.D., Boston.

IN the report of the Massachusetts State Board of Health of 1884, Professor Edward S. Wood published a very thorough and comprehensive article entitled, *Arsenic as a Domestic Poison*, and for a time the observation of cases of poisoning from this source became so prominent that it began to be considered a fad. The Board of Health, however, took steps to bring about a modification of the use of arsenic, and for a long period, cases of poisoning from that substance were heard of but rarely. As a result, at the present date, it is not in general apt to be considered as a troublesome factor.

For the past year, however, I have observed quite a number of instances of dermatitis from this source, and for that reason am perhaps more apt to consider it in persistent cases.

The history which I am about to report came to me in this way, as a result of much questioning of a mother and daughter who were referred to me for alopecia of long standing. Personally I did not see the eruptions, and the history is therefore a compilation of facts obtained from the family and the several physicians who were in attendance.

The mother and daughter were in rather poor physical condition, and their hair had the dry, lifeless appearance such as one sees after a prolonged illness. I discovered that they had both had persistent attacks of furunculosis during the past year and a half, and furthermore, that all the members of the household had suffered from attacks of a similar nature.

Five physicians were consulted at different times, but they were unable to find any positive cause for the trouble, and no treatment had any noticeable effect. I suggested the possibility of arsenic as a cause, and advised having the urine examined for that substance. The examination was made and positive findings were obtained in five members of the household.

It then occurred to the mother that before these attacks began, some powder had been applied for the destruction of insects about the kitchen and somewhat in other parts of the apartment which they

* Read before the 37th Annual Meeting of the American Dermatological Association, Washington, D. C., May 6-8, 1913.

were occupying. A specimen of the powder could not be obtained, but scrapings of dust from different parts of the apartment were examined and found to contain arsenic, one specimen showing 1.44% arsenious acid.

I am much indebted to the physicians who observed these cases; with their assistance, and with what data I obtained from the family, I am able to present the following history:

A family consisting of father, mother, a daughter of twelve years, and a baby, with a nurse and housemaid as servants, had been living in ordinary conditions of health for about a year and a half in a moderate sized apartment. Suddenly the housemaid developed an eczematous condition of the hands and paronychia, and later a furuncle on the arm. Eczematous conditions of the hands with recurrent paronychia and an occasional small furuncle continued for eight months, in spite of varied treatment. At the end of that time she left and obtained a situation elsewhere. The condition cleared up shortly after this, although she was doing the same sort of work, and there was no subsequent recurrence.

Her place was filled by an accommodator, who came in from time to time, and she developed the same type of eczematous dermatitis of the hands.

Soon after the housemaid's attack, the daughter developed a furuncle on the thigh, and one on the elbow, and a little later a good many small pustulo-follicular lesions. Next the mother had a large furuncle on the arm, one on the hand, and one on the thigh. A little later she had a small pustular eruption between the fingers. The baby within a month, after an intestinal upset, began to develop furuncles. Later he had a more or less general pustular dermatitis, and at one time an unusual type of acneiform dermatitis over the abdomen.

The nurse, a German woman about sixty years of age, was more virulently affected than any of the others. She had a general furunculosis which appeared about the time the baby was attacked, and later her condition became so serious that she was sent to a neighboring hospital. Here everything cleared up, only to recur when she returned to the apartment. She also developed cervical glands, which after some months broke down.

The husband had occasional furuncles, mostly about the head and neck. He was less about the apartment than the rest of the household. On two occasions, when he went away on fishing trips, the furuncles cleared up, but recurred when he returned home. The daughter went with him on one of these trips, and while away was

free from any trouble, but on returning, had recurrences of eruptions.

Eruptions of the type mentioned, mostly furuncular, continued to occur as long as the family remained in the apartment. They moved after the finding of the arsenic, and a marked difference in their condition was soon noticed.

The whole duration of the trouble covered a period of about eighteen months, and during this time, treatment of various kinds was tried, with no more than slight temporary benefit. The matter of sewage and other details of hygiene were gone into, but with negative results. Unfortunately, arsenic was not thought of. At one time it was thought that the condition might be due to contagion or infection of one member from another. Cultures were taken from lesions on the mother, daughter and baby, and showed in each case the *Staphylococcus aureus*. Autogenous vaccines were tried, but discontinued, as the treatment was unsuccessful.

Constitutional disturbances of one sort or another were more or less marked in all members, and all had pretty marked alopecia.

A most interesting feature to me in this history is the type of lesion, furuncular and pustular. Mention has been made by several writers of the occurrence of such lesions on exposure to arsenic, and I have myself observed two other instances of much milder grade.

In my experience, however, the most common type, and that usually recognized by the profession at large, is the eczematous or erythematous. Therefore, it would seem important to call more attention to the fact that other types may occur.

DISCUSSION.

Dr. BRAYTON said that about three months ago he saw at his clinic a man who was employed in a factory where 500 pounds of Paris green were manufactured daily. The man had a dermatitis of the hands, feet, ankles and scrotum, and he volunteered the statement that no man could work in that factory longer than two or three weeks, without suffering from a similar eruption. The lesions in this case were erythematous and papular, and very painful.

The speaker said he wished to add a few words in regard to the use of arsenic in preserving the skins of animals. During his earlier life he and a member of his family were very much interested in ornithology, preparing and mounting between 1,500 and 2,000 birds and mammals, some of the larger ones requiring as much as half an ounce of arsenic, which was mixed with alum and handled freely with the fingers. With the exception of an occasional slight inflammation about the edges of the nails, no ill effects were observed from the arsenic. The late Dr. Elliot Coues, the eminent ornithologist and biologist, in his *Manual on Taxidermy*, made the statement that no injurious effects followed the handling of arsenic in the process of preserving birds and animals. Dr. Brayton recalled one case of a woman, who accidentally took over 200 grains of arsenic. She was kept under observation in a hospital for over two years, and finally recovered so

that she was able to resume her vocation of a school teacher. The only permanent lesions she had was a slight contraction of the fingers and toes. She is still in good health after a period of over thirty years.

The speaker said he had long insisted that in practice physicians are more apt to give too little rather than too much arsenic in cases in which the drug is indicated. Personally, he often ordered one-twentieth of a grain three times daily, and had never seen any injurious results from it. Possibly he had been unusually fortunate, but properly given, he regarded arsenic as a most valuable drug in the treatment of a large number of diseases of the skin.

Dr. PUSEY, discussing Dr. Harding's cases, said that while arsenic might produce furuncular lesions, the fact was new to him, and he wondered if there was possibly not some other factor to account for the cutaneous lesions, occurring, as they did, in a number of persons in the same household.

The speaker said that during the past few months he had seen an epidemic of arsenic dermatitis in his service at the County Hospital. Ten or eleven patients were admitted from one paint factory. All of these had an acute dermatitis occurring on the hands and scrotum, and these patients stated that the laborers in this factory were usually affected in this way in the course of a few days. The attention of the Health Department was directed to the matter, and we have had no more cases. In these patients the eruption was not a furunculosis; it was a dermatitis. I can see how a furuncle or furuncles might occur with an arsenic dermatitis, as they occur in any dermatitis, but I do not understand an eruption of boils without dermatitis from arsenic. I congratulate Dr. Harding on working out the cause in so obscure a group of cases.

Dr. ORMSBY said that in 1901 he saw one of the largest epidemics of arsenic dermatitis. This occurred in England, and was the result of drinking beer containing arsenic. In those cases the lesions consisted largely of a dermatitis and an extreme pigmentation of the skin, so that some of the patients looked almost like colored people. In many cases, not only the skin but also the nervous system was affected. There were no cases of furunculosis, so far as he could recall.

Dr. WINFIELD said he had seen a number of cases of arsenical poisoning occurring in workmen in pigment factories, and also in longshoremen who handled Paris green. In those cases coming from the pigment factories, the lesions were limited to a dermatitis about the finger nails and scrotum, while those who handled Paris green often developed boils. The pigment factories from which these patients came were very filthy.

Dr. POLLITZER said he had seen a number of cases of skin lesions due to arsenic, and in some of these there was a development of pustular lesions. He thought we should make a distinction between the effect of arsenic taken internally and that produced by its external application in the form of powder. Persons handling arsenic in the moist form of a paste for caustic purposes or for preserving hides and skins were practically never affected by its use. Taken internally, it might produce its well known toxic effects on the skin. In the cases reported by Dr. Harding, we were probably dealing with a local effect of arsenic in a finely divided state, and in that form, as we often see in workers in arsenic factories, we might have furuncular lesions produced. These, however, were not produced directly by the arsenic, but were probably the result of an inflammatory process at the follicular orifices with secondary staphylococcal infection.

Dr. RAVOGLI said that Paris green was the arsenite of copper, and the copper might be responsible for the eruption on the skin. Brass polishers were not infrequently affected with a dermatitis, and in those who handled Paris green the copper might have something to do with it.

Dr. WINFIELD said the dermatitis caused by copper was quite different from that produced by Paris green. He had seen cases where arsenical pigmentation followed poisoning with Paris green.

SYPHILIS IN THE CURRICULUM OF MEDICAL SCHOOLS.*

By WILLIAM THOMAS CORLETT, M.D., Cleveland.

Professor of Dermatology and Syphilology, Western Reserve University,
Cleveland.

THE PREVALENCE AND SOME OF THE CONSEQUENCES OF SYPHILIS.

THE prevalence of syphilis is little understood by the laity, and I believe it is not sufficiently appreciated by the medical profession. Previous to the discovery of the delicate tests, which are becoming more and more exact, cases of this disease more frequently than at present went unrecognized as such by the medical attendant.

At the International Conference at Brussels in 1899, Le Noir stated that 15 per cent. of the inhabitants of Paris were syphilitic; Fournier's estimate gave 17 per cent. We have reason to believe that these estimates apply in a general way to the cities of other countries. It is difficult to determine with accuracy the precise number of syphilitics in a given community. Even in hospitals, accurate statistics in regard to syphilis are not always obtainable. My own service records show 24.5 per cent. of this disease, of which 37 per cent. was met with in hospitals and 12 per cent. in private practice. Of the cases admitted to a medical ward in a general hospital where syphilis is supposed to be excluded, 32 per cent. were syphilitic. Of this number one was a so-called secondary or recent infection, while the others presented later manifestations, some of which were of an obscure nature. Another ward in the same medical service contained 22 patients of which 12, or 54 per cent. were syphilitic.

In the private practice of a physician devoting himself to the ear, nose and throat, of 50 consecutive cases 8, or 16 per cent. were luetic. I think it may be conservatively estimated, therefore, that of all patients admitted to the hospitals in this country at least 20 per cent. are victims of this disease and are admitted for some of its manifestations. A large number of these cases remain only sufficiently long to receive temporary benefit and are discharged, often returning at a later date with some other manifestation of the disease or some other organ involved.

* Read before the 37th Annual Meeting of the American Dermatological Association, May 6-8, 1913.

In the State Hospital for the Insane at Cleveland, Dr. C. H. Clark, the Superintendent, informs me that 13 per cent. of all patients admitted during the past year were suffering from general paralysis of the insane. Of this number, 94 per cent. gave a positive Wassermann reaction and 60 per cent. gave a history of luetic infection. This does not include other involvements of the nervous system—which is known to be especially susceptible to this disease—in which insanity does not enter.

During the past year, in a symposium on syphilis at the Royal Society of Medicine in London, Yearsley stated that 6 per cent. of the inmates in the London County Schools for the Deaf bore the stigmata of congenital syphilis. French, in speaking of the prevalence of syphilis, referred to Dr. Holland's estimate in 1854, that in great Britain a million and a half were infected with this disease each year, and since the improved facilities for travel by railroads, syphilis has greatly increased in the United Kingdom. He further said that in England 11 per cent. of the male private and 8 per cent. of the male pauper admissions to asylums are due to this disease.

When we consider the large percentage of luetics who receive treatment from drug stores, charlatans and other incompetent persons, and the large number who believe themselves cured when the disease is only latent, the figures are appalling. I recently was consulted by a man with syphilis of one year's duration, who had been treated during this time by "Christian Science." Of course, the disease presented the same status as the many cases one sees that have received no treatment. Many of these cases, however, sooner or later apply at hospitals or finally are admitted into asylums.

TO WHAT EXTENT IS SYPHILIS A CURABLE DISEASE?

The object lesson given to the world by Col. Gorgas and the Sanitary Commission having charge of the Panama Canal Zone, has stimulated a more keen interest in preventive medicine. Yellow fever and malaria have been successfully controlled, a study of tuberculosis world wide is begun, and syphilis, which surpasses them all in the amount of human suffering and the loss of life it entails, awaits a Gorgas to point the way of lessening its evils, which, while less spectacular, are more deadly than all. That the disease may be stamped out, or, as in the case of yellow fever, may be suppressed, is not probable; but that it can be better controlled, many of its evils mitigated, and its treatment improved, there can be no doubt.

The various measures adopted to limit the spread of venereal

diseases, while of great benefit, have not been wholly successful nor have they accomplished what was anticipated by their promoters. While individuals of both sexes remain sources of contagion for many years and at a time of life when the procreative instinct is the strongest, any practicable measures to control the propagation and spread of diseases communicated by sexual congress will be of limited influence.

On the other hand, when we consider that syphilis may be eradicated or rendered innocuous to others in a comparatively short time, the clue to its elimination seems to lie in its prompt and efficient treatment, rather than in statutes which are futile and segregation which is impossible.

In my service at Lakeside Hospital, the department of skin diseases and syphilis has for nearly two years endeavored to render patients innocuous to others at the earliest possible moment, and in this endeavor we are especially anxious to receive patients at the first appearance of the initial lesion. In a few instances we believe we have aborted the disease at this stage and have demonstrated its possibility. In cases first seen during a later period, the same heroic measures have, we believe, greatly shortened the time when the disease remains a public menace.

IS SYPHILIS A CURABLE DISEASE?

I recall a symposium on the treatment of syphilis in one of the medical journals which appeared a few years ago, in which the length of time thought necessary to eradicate the disease was in an inverse ratio to the experience and clinical acumen of the writer.

The foregoing reveals the fact that syphilis has been either inadequately treated in the past or that the disease in a high percentage of cases is incurable. On this point I believe the essentially incurable cases of syphilis are few, and while our present mode of life in America may tend to increase the susceptibility of the nerve structures, yet the so-called parasyphilis is largely the result of inefficient treatment.

It is evident, also, that syphilis should be more openly dealt with and that its importance as one of the foremost of human ills be more generally recognized by governing boards of hospitals and medical schools, to the end that its diagnosis and treatment may be better understood by the family doctor, to whom the patient most frequently confides, and at a time when the greatest hope may be entertained of a cure.

The vast strides made in our knowledge of syphilis during the past five or six years and our present mode of combating the disease, whereby it is hoped by more systematic and heroic measures it may be eradicated within twelve months after infection, offer a new incentive to have all patients thus infected subjected to early and efficient treatment. Before this can be accomplished on a sufficiently large scale to affect the public health of communities, it will be necessary that the average physician become better informed as to recent developments in the recognition and treatment of the disease than now commonly obtains, and that in the future he keep in touch with its therapeutic progress.

It may be looking too far into the future to anticipate the segregation of such cases as is now done with the exanthemata, but in patients applying to hospitals for relief, something might be accomplished by inducing them to submit to a more thorough treatment until, so far as our present tests enlighten us, the disease is shown to be eradicated, or at least latent and consequently less of a public menace.

PUBLIC INSTRUCTION.

Furthermore, the laity should be instructed concerning the nature, prevalence and danger of syphilis.

From the report of Dr. A. R. Warner, Assistant Superintendent and Executive Officer of the out-patient department of the Lakeside Hospital, I quote the following:

"New cases of syphilis admitted in 1911, which did not return in 1912:

	Number of cases.	Average number days' treatment.
Suspicious primary sores	19	2.2
Positive primary sores	20	4.5
Active syphilis	79	3.9
Chronic syphilis	45	4.2
Congenital syphilis	4	1.0
Total	165	General average .. 3.2

"This total of one hundred and sixty-five cases is 49% of the total number of cases of this disease admitted during the year. In other words, half of the cases of 1911 received no benefit from the dispensary at all, for no value can be attached to four visits. Ignorance, carelessness or shame kept them from coming."

CONCLUSIONS.

As to the inadequacy and haphazard methods so frequently observed in the management and treatment of syphilis the following factors, I believe, to be largely responsible.

(1) The position syphilis occupies in the curriculum of medical schools and colleges.

(2) Incompetent teaching.

(3) The prevalence of so many trade medical journals subsidized by the manufacturers of drug compounds and sent broadcast to every doctor whose address is obtainable.

(4) The lack of exact knowledge on the part of the laity, who are the makers of laws, concerning medical subjects, making possible the various cults which spring up and thrive for a time in the name of medicine, as others pass away.

Fundamentally, therefore, it is in the making of doctors that the condition as outlined, which we deplore, is largely due. Beginning with the curriculum, syphilis should be recognized as one of the few most important diseases of which a fair knowledge is necessary to insure graduation. It should not only be given a definite position in the schedule, but its systematic teaching should be, as far as practicable, confined to this department. The chief of this department should be especially drilled in the subject of syphilis and should be a full-time teacher, supplementing clinical by laboratory instruction.

Syphilis is not a surgical subject and it is too important to be an appendage to the genito-urinary surgeon or to any other department of medicine. That other subjects may be included in the department of syphilis seems commendable. That to other departments should be entrusted the diagnosis and treatment of syphilis of special organs is also the only practicable course to secure the best results. But that syphilis should be a side issue and its identity lost by being taught by the occupants of various chairs, I do not for a moment believe. Nor do I believe that in hospitals and polyclinics patients entering with the involvement of special organs, such as the eye, and even more especially the throat, should be treated in these several departments without the co-operation of the department to which the patient should be referred, after the **special local manifestation is relieved**. Such is the system carried out as far as practicable at the out-patient department of Lakeside Hospital, and for two years this has been pursued with increasing effectiveness and co-operation.

TO WHAT OTHER CLASS OF DISEASES IS SYPHILIS MOST
CLOSELY ALLIED?

In the study of syphilis in all its manifestations, many years would be required to become a skilled clinician. Added the laboratory studies of pathology and serology, and a lifetime would be occupied in preparing the ideal syphilologist. Since the teaching of syphilis must be to a certain extent co-operative, and as the skin is of all parts the most frequently and most conspicuously involved, in fact, in a very high percentage of cases is the only part presenting any symptoms of importance to the patient, it follows that to cutaneous diseases lues stands nearest akin.

Furthermore, since no thoroughly equipped dermatologist is without laboratory training in serology and microscopy, and since no one can recognize the common and various manifestations of syphilis without being skilled in the various lesions encountered in diseases of the skin, it seems most desirable and practicable that the teaching of syphilis should, so far as possible, be confined to the department of dermatology.

At the last meeting of the American Medical Association a committee was appointed to draw up resolutions recommending the most feasible way of improving the teaching of syphilis in the medical schools of this country. As chairman of this committee I have endeavored to ascertain the opinions of teachers and others interested in various medical schools, concerning this subject. It seems to be almost the consensus of opinion that, for the present at least, syphilis should be included with diseases of the skin for the reasons above given.

In this I do not advocate the subordination of syphilis, as in the modest position it occupies on the title page of *THE JOURNAL*, but that the teaching of syphilis to prospective doctors, should be recognized as by far the most important function in the department of dermatology.

While it may seem too much to expect that all of these obstacles to medical progress will be removed, yet it is not impossible of accomplishment. Foremost stands education, and great strides are being made in medical education throughout the country and greater will follow. The better educated physician will more and more refuse to encourage or to heed the teaching of medical trade journals. The education of the people in matters pertaining to health, which has already begun, will remove some of the conditions which are det-

rimonental to their best interests. Enlightened boards of trustees will make provision for hospital accommodation of syphilis, which experience teaches cannot be excluded and which is now scattered promiscuously under various names throughout the wards. They will likewise recognize the great economic question of eliminating this great class of prospective hospital inmates, by furnishing means for early and efficient treatment.

There is an agency at work among the laity which is destined to bring about a better understanding of syphilis. I refer to the social worker. Through the publicity attached to his labors, people are destined to hear of the prevalence and some of the dangers of this disease. Already congresses are being held, at which social evils are discussed; educational clubs of late have sought information on eugenics and college students are more frequently given instruction on certain medical subjects that every one should know. I believe the next decade will see a marked change in this particular field of knowledge and the more common facts concerning syphilis will be better and more generally understood.

In this trend of medical advancement, with its object of improving and maintaining public health, those engaged in teaching medicine should take the lead. But while syphilis is covertly relegated to a subordinate or indefinite position in the curriculum of medical schools with inadequate hospital provision, so long will the chaos that now exists continue; so long will progress be impeded and the horrible consequences of syphilis continue.

3618 EUCLID AVENUE.

DISCUSSION.

DR. RAVOGLI stated he was connected with the Ohio State Board of Examiners, and at each examination he gave the students three questions on dermatology and two on syphilography, one of which always was, "How do you treat syphilis?" In their replies, students of the regular schools include mercury and salvarsan, while others, not from the regular colleges, mention such remedies as tincture of stillingia.

It was one of the duties of this Association, Dr. Ravogli thought, to make an effort toward enforcing a more thorough and practical course of study in the treatment of syphilis in the various medical colleges throughout the country, and with that object in view he wished to endorse all that Dr. Corlett had said in his excellent paper.

A CASE OF PROBABLE SARCOID RESEMBLING LUPUS
ERYTHEMATOSUS. TREATMENT BY THE
FINSSEN-RAY.*

By HOWARD FOX, M.D., New York.

DURING the past two years I have had the opportunity of studying the following unusual case which has puzzled a large number of experienced dermatologists both in this country and abroad.

The patient, Miss X, was 34 years of age, born in the United States. Her parents were living and healthy. She had suffered as a child from scarlet fever, diphtheria, measles and whooping cough, from a severe attack of pneumonia at five years of age and a second milder attack when sixteen years old. Since childhood she had suffered from occasional tender swellings at the side of the neck, which had always disappeared without breaking down or discharging. There was no history of syphilis.

Two years and a half ago she noticed a pea sized nodule beneath the mucous membrane of the left cheek. Two months later, according to her statement, the nodule extended to the skin and became distinctly elevated above its surface. It then began to flatten and extend in area, becoming slightly depressed in the centre. It continued to spread until, at the end of ten months, it measured approximately one and a half by two inches. The patient then presented a diffuse, firm infiltration of the left cheek, with a distinct circinate group of nodules. The surface of the skin was dull-red and shiny and devoid of any scaling. There was also a slight depression in the centre of the patch. There were no subjective symptoms. Judging from the eruption alone, the most probable diagnosis seemed to lie between a nodular syphilide and some form of cutaneous tuberculosis.

A Wassermann test was made by me as well as by another physician and both showed an absolutely negative reaction. A von Pirquet test also proved to be negative. A differential leucocyte count showed nothing abnormal. An examination of the heart and lungs was negative. The patient was somewhat delicate in appearance, though the general health seemed to be excellent.

* Read before the 37th Annual Meeting of the American Dermatological Association, May 6-8, 1913.

In May, 1911, the patient was presented before the New York Dermatological Society, where the opinions of the members were extremely divergent. Several considered the eruption to be some form of cutaneous tuberculosis. One considered it syphilis, another thought it a nodular lupus erythematosus while even scleroderma was mentioned as a possibility.

A somewhat unsatisfactory therapeutic test was given, which failed to cause any improvement in the eruption. A mercurial plaster was worn continuously for six weeks and protiodide tablets taken for ten days. The patient then consented to have injections of salicylate of mercury. Two of these were given at intervals of a week, in doses of one grain. As this treatment was followed by diarrhœa with bloody stools, it had to be discontinued. The patient refused an injection of salvarsan as a diagnostic test.

In the course of the next six months the patch upon the left cheek increased in size and three pea sized, slightly elevated nodules appeared upon the right side of the face, in front of the ear. One pea sized nodule also appeared below the chin. During this time the patch upon the left side occasionally showed scaling which was strongly suggestive of lupus erythematosus. This scaling disappeared from time to time and reappeared without any apparent cause, and when no external application had been given.

The patient did not care to have a biopsy performed and in an attempt to arrive at a diagnosis she was sent to a number of the most prominent dermatologists of New York and Philadelphia. Again the opinions failed to agree, being divided between lupus vulgaris and lupus erythematosus, the majority favoring the former diagnosis.

Assuming that the process was probably some form of cutaneous tuberculosis, it was decided to try the Finsen ray. Accordingly a Finsen-Reyn lamp was procured and of equal importance, the services of an experienced operator, who had graduated at the Finsen institute at Copenhagen, were obtained. The lamp was used intermittently during a period of seven and a half months, from October 2nd to May 18th, 1912. During this time seven courses of treatment were given upon the left side of the face. Six of these courses consisted of eleven sittings, given as far as possible on consecutive days. In one course only ten treatments could be given. During the first four courses the treatment was continued for one hour and in the last three, for two hours at a sitting. Altogether the lamp was applied on the left side of the face, 109 hours. The small group of three nodules on the right cheek was treated by one

half-hour sitting, 14 one-hour and 4 two-hour sittings. A circular area with a diameter of a half an inch was rayed and a current of eighteen to twenty amperes was used. The reaction obtained by the treatments of one hour were marked and consisted of erythema,

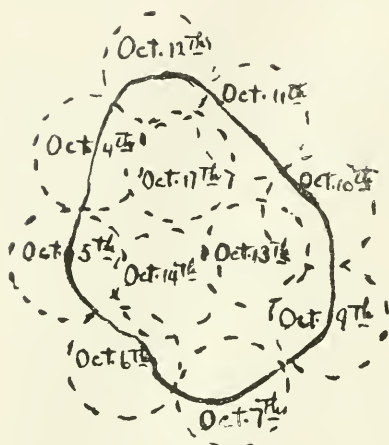


Fig. 1.

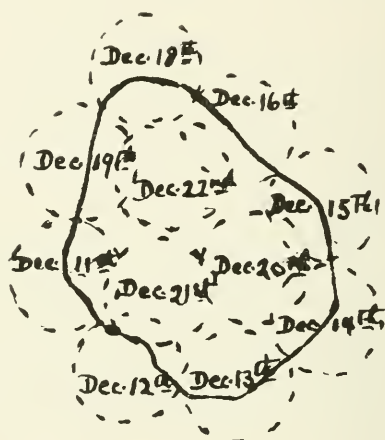


Fig. 2.

Figs. 1 and 2. Result of 43 Finsen treatments of 1 hour each. Outline of patch as indicated by solid line apparently unchanged.

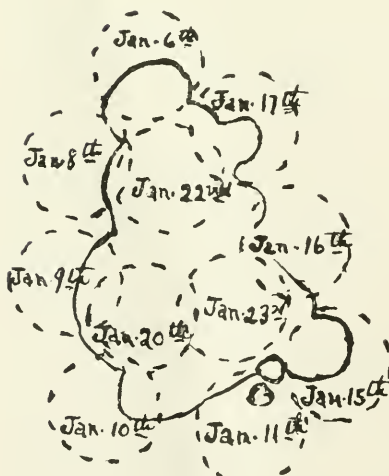


Fig. 3.

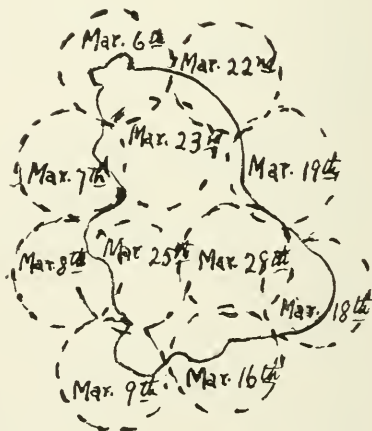


Fig. 4.

Figs. 3, 4 and 5. Result of three series of 2 hour Finsen treatments, a total of 66 hours. Gradual disappearance of infiltrate indicated by solid line.

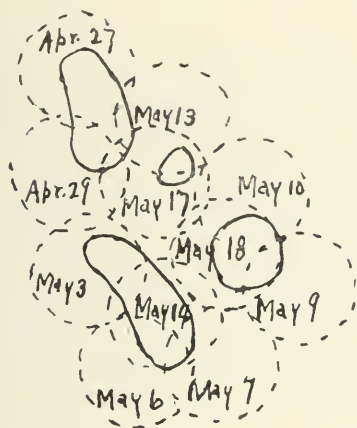


Fig. 5.



Fig. 6.

Fig. 6. Result at end of 3 months of 7 series of treatments. Continuous line shows the only infiltrated areas remaining on June 1, 1912. Dotted line shows healed but depressed area.

vesiculation and the formation of bullæ. The reactions produced by sittings of two hours were very intense and frequently followed by swelling of the face, at times enough to partially close the eye.

Before the Finsen therapy was begun, the patch on the left side had steadily continued to spread, while after this method of treatment had been instituted, the disease appeared to be checked. Except at one point, there was no further increase in the extent of the lesion, and in addition the scaling had disappeared. There was practically no change, however, in the deep infiltration, until treatments of two hours' duration were given. After the third series of these intensive treatments, there remained only a single area of infiltration about half an inch in diameter. The patch upon the right side of the face disappeared in the course of six months. During this time, however, and while the treatment was being given, new lesions continued to appear near the original patch. The small nodule beneath the chin disappeared after three treatments of one hour each.

The patient then decided to go to Copenhagen where she consulted Dr. Forschhammer and Dr. Reyn. Both of these experts felt positive that the condition was not lupus vulgaris nor any form of cutaneous tuberculosis. In their opinion it was lupus erythematosus.

After the patient's return to America, she was seen by me in

September, 1912. During her absence a considerable change had occurred. The small patch upon the right side had extended considerably and now occupied an area of one by one and a half inches. It was scaly and at first glance looked like lupus erythematosus. On palpation, however, the presence of nodules could be distinctly felt. The original patch on the left cheek had almost disappeared, leaving a marked depression in its central portion.

The patient was again shown before the New York Dermatological Society in January of this year as a "Case for diagnosis, possibly sarcoid," and for the second time the opinions differed.

The patient finally decided to submit to a biopsy and a piece of tissue was removed from the patch on the right cheek. The sections were kindly made by Dr. Walter J. Heimann, who reports upon them as follows:

The excision was unfortunately not deep enough to include the subcutaneous fat, nor wide enough to include the adjacent normal skin. Thus the actual depth of the process could not be determined nor could its relation to the normal tissue be studied. Half of the tissue obtained was fixed in 10% formalin, the rest in absolute alcohol, and both were imbedded in paraffin. The sections were stained by the ordinary methods employed, and both the alcohol and formalin preparations showed the same picture.

Hæmatoxylin-eosin stain. Save for slight hyperkeratosis and an occasional hyperkeratotic follicular plug, the epidermis is normal. The few plugs found do not distend the follicles. The contour of the papillary body is not altered but the latter, as well as the subpapillary layer and deeper strata of the corium all contain multiple foci of infiltration. Some of these lie about dilated blood or lymph vessels, others about hair follicles and sebaceous and coil glands, but the majority are independent of any of these structures. Nor do these structures themselves present anything pathological. The collagenous fibres are not markedly swollen.

The infiltrations mentioned above vary in size from minute round foci to enormous, irregularly outlined ones, involving half the depth of the corium, down to the margin of the subcutaneous tissue. These infiltrations contain a few thickened capillaries, the endothelium of which is strikingly swollen. There are also a few connective tissue fibres within, showing a certain degree of degeneration. The cells constituting the infiltration are predominatingly of the round variety. A few plasma cells and a fair number of epithelioid cells and fibroblasts are to be seen. The arrangement of these elements suggests that of tubercle, but there are neither necrosis nor giant cells, and with the carbol-fuchsin stain, no tubercle bacilli were found.

Van Gieson stain. This section shows the same features as the one described above, but the arrangement of the connective tissue stands out more clearly. Collagenous fibres are distinctly visible within the foci, in process of degeneration.

Weigert Elastic Tissue stain. The elastin of the papillary body is unmodified, save in the vicinity of the infiltration. In the deeper layers this disturbance is general. Near the infiltrations the elastin is either shoved aside or the fibres are completely severed. Under the latter circumstances the parted strands have snapped back and curled, the shrinkage having caused thickening. Elsewhere the elastin is fragmented, thick, wavy and deeply stained. Within the infiltra-

tions an occasional fibre, the outline of which is wavy, may be found. Such fibres are either abnormally thick or thin. None of Unna's elastin was found. In conclusion, I would say that the histological picture is much more suggestive of sarcoid than of lupus erythematosus.

From a clinical standpoint it was never possible in my case, to make a positive diagnosis. This has been true in the majority of cases of sarcoid that have been reported, the authors generally having the honesty, as Urban remarks, to confess that they had not arrived at a definite conclusion until a biopsy had been made. At first the most likely diagnosis seemed to be either syphilis or tuberculosis. Later, when the scaling appeared, the disease looked strikingly like an ordinary lupus erythematosus, except for the presence of nodules. The so called nodular type of lupus erythematosus described by Crocker might have been seriously considered before the histological examination was made.

In this connection it may be mentioned that one of the cases of sarcoid reported by Kreibich and Kraus (*Arch. f. Dermat. u. Syph.*, 1908, XCII, p. 173) had been previously considered to be lupus erythematosus. These authors mention the fact that the literature contains a few references to cases of lupus erythematosus which showed a tubercular structure or which gave a positive tuberculin reaction. They think it possible that some of these cases might in reality have been sarcoid. They add, "Perhaps some cases of lupus erythemato-tuberculeux, some cases of lupus vulgaris erythematoses would to-day allow a different conception."

It seems to me possible that the cases briefly described by Crocker as the nodular type of lupus erythematosus, might have proved to belong in the group of sarcoid tumors if histological examinations had been made.

In my case the sex of the patient, situation of the lesion and absence of ulceration might be slightly in favor of the diagnosis of sarcoid. The presence of the marked central depression in the original patch would lend more weight to this diagnosis. Certainly such a depression is not seen in my experience in cases of syphilis or in either variety of lupus. My patient was also assured by the physicians in Copenhagen that such a condition was never followed by the use of the Finsen-ray. The pigmentation described by Boeck as occurring in the retrogressive stage of sarcoid was not present in my case. This was a symptom with which I was personally familiar, having had the opportunity to observe the case of sarcoid reported by my father, Dr. George Henry Fox, in collaboration with Dr. Udo J. Wile. Furthermore, the minute grayish-yellow foci which are

said to appear under glass pressure in the Boeck type of sarcoid were not observed in my case.

As a result of the histological examination, both syphilis and tuberculosis can be excluded. The presence of multiple foci of infiltration scattered throughout the entire cutis is a pathological change that is not seen in lupus erythematosus. From a consideration of the clinical and pathological evidence, the most likely diagnosis seems to be some form of sarcoid.*

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DISCUSSION.

DR. C. J. WHITE said that by the first photograph shown by Dr. Fox, he thought lupus erythematosus could be excluded. A nodular lupus erythematosus had never come under his observation. Histologically, also, the picture did not agree with the diagnosis of lupus erythematosus, but was compatible with that of sarcoid tumors.

DR. TRIMBLE said that when he first saw this patient, at a meeting of the New York Dermatological Society, he made a clinical diagnosis of lupus vulgaris, basing his opinion upon the deep infiltration, the nodular character of the lesions and the color. The second time he saw her, he still held to that diagnosis, but subsequently, as Dr. Fox had stated, she had developed a patch on the opposite side of the face which was practically typical of lupus erythematosus.

The speaker also said he had never seen a case of lupus erythematosus and lupus vulgaris in the same patient, but the deep depression following the healing of the original lesion, was evidence that the former infiltration had been extensive and deep-seated; such a condition was entirely foreign to erythematous lupus, and there still lingered in his mind the impression that the first lesion was tuberculous. It had also occurred to him that probably the pathological picture might have been different if the biopsy had been made before the case was treated. The case was intensely interesting and very difficult of diagnosis; whether it was sarcoid or not he was not prepared to say, but even so, some observers, notably Darier, claimed that sarcoid was in all probability tubercular; the so-called non-ulcerative type of tumor of the hypoderm.

DR. SCHAMBERG said it was obvious that this patient must have presented different clinical features at different periods. The speaker said that at the time he saw her the nodular appearance of the lesion was not very manifest, and he had no idea that it was lupus vulgaris. It was suggestive of a lupus erythematosus, but there was a certain infiltration of the patch which led him to express the opinion that if it was not lupus erythematosus it might prove to be a case of sarcoid. The diverse opinions that had been expressed by those who saw the

* The lesions upon the right side of the face and a patch about $\frac{3}{4}$ of an inch in diameter on the left side were subsequently treated by Dr. Fred Wise by carbon dioxide snow. Altogether 18 treatments were given during a period of 7 months, from the middle of April to the middle of November, 1913. The snow was applied with light to medium pressure from 5 to 10 seconds at each sitting, the applications being followed by considerable bullous reaction. The same ground was covered three times during the period of treatment. When seen by me on December 15th there was no apparent evidence of the disease. The scarring was relatively slight and the cosmetic result excellent. The depression in the left cheek still remained.

PLATE XI.—To Illustrate Article by Dr. Howard Fox, on A Case of Probable
Sarcoid Resembling Lupus Erythematosus. Treatment by the Finsen Ray.

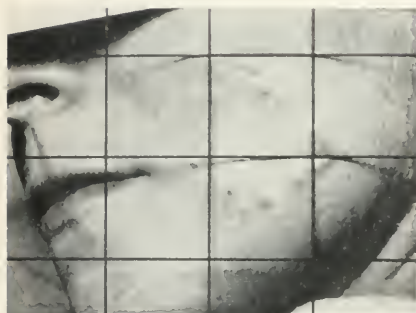


Fig. 1.

Appearance of lesion when first seen.
Before Finsen treatment.



Fig. 2.

Later appearance, simulating lupus erythematosus.
Before Finsen treatment.



Fig. 3.

Recent patch looking like a typical
lupus erythematosus. Not controlled
by Finsen treatment.



Fig. 4.

After 109 hours of Finsen treatment.
Depression suggesting sarcoid.

PLATE XII.—To Illustrate Article by Dr. HOWARD FOX, on A Case of Probable
Sarcoid Resembling Lupus Erythematosus. Treatment by the Finsen Ray.

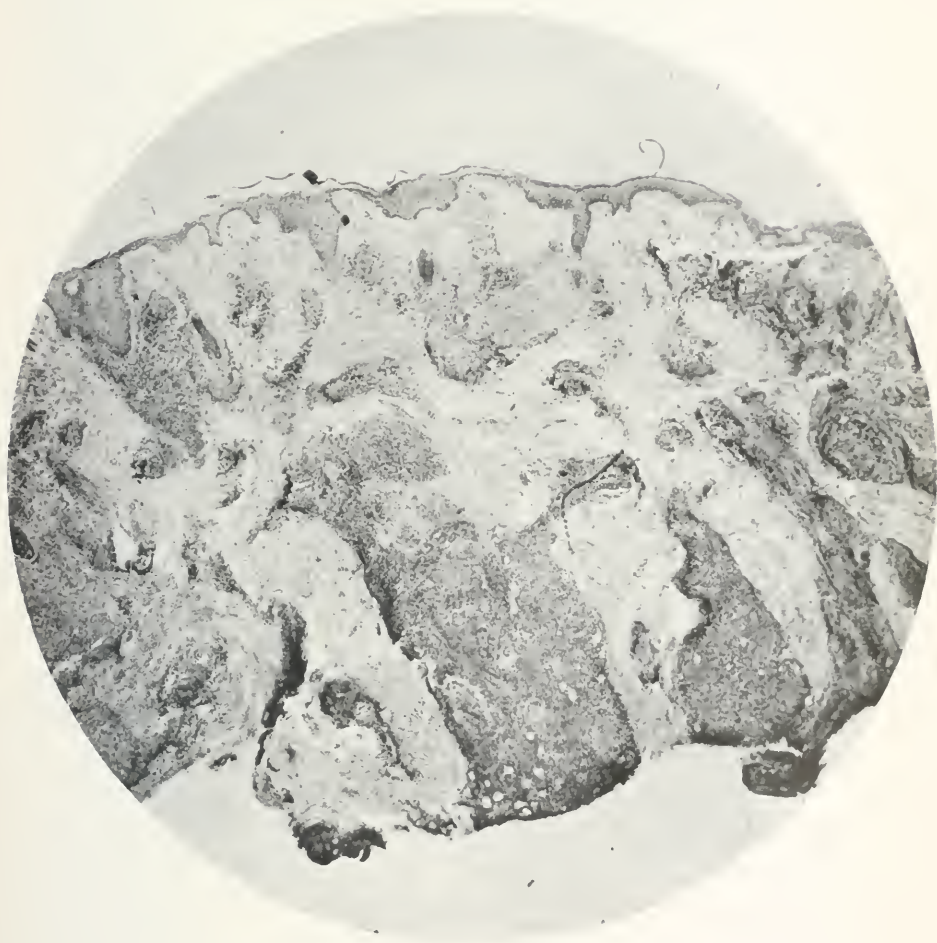


Fig. 5.

Low power. Shows various-sized, circumscribed infiltrations scattered through the entire cutis. Infiltrated areas are composed mostly of small round cells. A few plasma cells and a fair number of epithelioid cells and fibroblasts, but no giant cells are present.

patient at different times were evidence of the fact that the lesion had varied in its appearance.

Dr. POLLITZER, who had made some microscopic studies of the case, said the sections he examined were obtained after the patient had been subjected to the Finsen light treatment, which would naturally produce changes, at least in the upper layers of the skin, which did not belong to the original process. The striking feature was the presence of masses of cells, lymphoid in character, lying just above the fat, without any apparent reaction of the surrounding tissue. These great masses of infiltration, lying in tissues where apparently no reaction had occurred, were quite characteristic of sarcoid, and the speaker said he made that diagnosis simply on the histological picture of the deeper portion of the corium.

A CASE OF PUSTULO-BULLOUS ERUPTION, SIMULATING PEMPHIGUS FOLIACEUS

By H. H. HAZEN, M.D., Washington, D. C.

Professor of Dermatology, Georgetown University; Clinical Professor of Dermatology, Howard University.

(From the Dermatological Department of Freedmen's Hospital.)

ON March 12, 1913, there came to my clinic a negro woman, aged 29, who complained of an itching eruption that had been present off and on for about three years. She stated that the present attack began about the middle of November, 1912, and that the scalp had been the chief site affected, although there had been a few blisters on the body and limbs. Owing to the fact that the patient came in just at the end of the clinic hour, a complete examination was not possible at that time. The condition of the neck and scalp so closely resembled an ordinary impetigo contagiosa that such a diagnosis was made and the patient put upon an ammoniated mercury ointment and told to report the next day for further examination.

She was not seen again until March 29th, when she entered my service at Freedmen's Hospital. She stated that in the interval the eruption had become much worse, now being chiefly on the body, and that, in addition, she was having persistent vomiting.

A complete history was now obtained and it was learned that the patient had a vesicular eruption about three years previously, several other members of the household being similarly affected, and that one year later there had been another such outbreak in the house where she lived, but that both times the lesions on all parties

had speedily yielded to ointments. With the exception of the fact that she was employed as a rag picker, no other helpful facts were elicited. No history of syphilis could be obtained.

The present trouble began late in November, 1912, as little "water blisters" on the scalp and around the hair margin. There had been an occasional vesicle upon the body and arms. A few days after the appearance of the eruption, the right ear began to discharge, but otherwise her health had been excellent. For two weeks before admission to the hospital there had been some indigestion, and for three days severe vomiting.

On March 30th it was noted that the patient was apparently a full-blooded negress, that her general physical condition was excellent, and that she did not look ill. A careful physical examination revealed no lesions of heart, lungs or abdominal viscera. The lymphatic glands were not enlarged.

The cutaneous condition at that time is well shown by the photograph. The primary lesion was a vesicle, filled with a rather turbid fluid, superficial and with flaccid walls. The very early vesicles felt much harder than one would have suspected from their superficial appearance. These lesions were located chiefly on and under both breasts, in the axillæ, over the lower abdomen and in the groins, although there were a few lesions on all other portions of the body and limbs. There were no lesions of either the vagina or the buccal cavity. Crusting was present only on the lesions on scalp and neck. As the bullæ became larger, their first size being about 5 mm. in diameter, they would coalesce, and only then would the surrounding skin peel off under pressure or friction. The largest bulla was not over 3 cm. in diameter.

At the time the case was considered to be one of either pemphigus or pemphigus foliaceus, and we decided to watch her a couple of days before instituting any local treatment, although efforts were made to check the vomiting.

On April 1st Dr. Gilchrist, of Johns Hopkins, saw the patient with me and was inclined to consider it as a case of pemphigus foliaceus.

On April 3d it was noted that the eruption was spreading, and that the primary lesions were now frankly pustular or vesiculopustular, and that they were much more numerous and much smaller, all of the large ones having disappeared. Nikolski's sign was not yet present in the new lesions, but in the older ones, where confluence had taken place, it was easy to demonstrate that the surrounding skin would easily peel off. The case now looked like a typical

pemphigus foliaceus, for the body was covered with crusts, beneath which was a raw, oozing surface that bled readily. The same sickening odor so characteristic of the other patients with pemphigus foliaceus had been present from the start, but was now much stronger. There were no lesions of mouth or vagina, but a vesicle had appeared upon the left cornea.

The discharge from the ear had stopped. Vomiting was continuous, and absolutely no food could be retained, in spite of all the efforts of Dr. Burbank, visiting physician to the hospital. Gastric lavage and all drugs recommended for such a condition were faithfully tried, but all proved useless. No changes could be made out in the reflexes, mentality was unimpaired, and there was no headache or pain or tenderness over the mastoid, so it was felt that the vomiting could not be cerebral in origin, due to a brain abscess. Pulse and temperature were normal, and the patient looked well.

The dry treatment, consisting of the application of a bland dusting powder, as recommended by Dr. White, was now begun.

On the 7th the patient was still in the same condition as when the last note was made, but on the following day she was very weak, and the nurse reported that she had been delirious during the night. The pulse and temperature were still normal, but the vomiting persisted, only one milk punch having been retained during the time that she had been in the hospital. Reflexes were still normal. The eruption was now almost universal, only the hand, feet and face being uninvolved.

The patient then went down hill rapidly and died on the night of the 10th.

Owing to the fact that the patient collapsed suddenly, the laboratory investigations were not so complete as had been planned, but they seem worth reporting.

The Wassermann test was negative.

There was no evident anamia, nor did the blood cells show any parasites in either fresh or stained specimens. The white cells were 11400 in number and a differential count of five hundred leucocytes stained by the Jenner method gave the following results:

Polymorphonuclears	85.6%
Eosinophiles	2.0%
Large mononuclears	0.4%
Small mononuclears	8.4%
Transitionals	3.6%
Mastcells	0.0%

The urine had a specific gravity of 1021, was alkaline, and contained no sugar but much albumin and a fair number of erythrocytes.

A fresh pustulo-vesicle was excised under local anaesthesia, hardened in for-

malin and stained with hæmatoxylin and cosin. The vesicle formed just beneath the horny layer, showing the same picture as does impetigo contagiosa, and was filled with polymorphonuclears and eosinophiles. The cells of the rete were normal, but there were present a few invading leucocytes and a very few fixed tissue cells. In the corium there was a slight vascular dilatation and perivascular infiltration consisting of small round cells, fixed tissue cells and an occasional leucocyte.

Smears from the cutaneous lesions failed to reveal any parasites in either the fresh or stained specimens, other than a few cocci, that increased in number as the case progressed. The organisms recently described by Lipschutz were carefully searched for, but his findings could not be confirmed. It would, of course, take a trained protozoölogist to definitely decide upon the accuracy and value of his findings, but at this point it may be said that very many parasites of the same nature as those described by Lipschutz have been discovered from time to time, and that the vast majority of them have proven to be either cell degenerations or artefacts. In some of the smears stained by the polychrome methods, bodies very like those described by Lipschutz were seen, but close observation showed that they did not always lie in the same plane as the cells, that they were frequently perched upon a cell, that they graded off into very irregular shapes for parasites, and that they were not constant in size; in other words, they were artefacts, undoubtedly due to precipitates from the stain. Of course I am not affirming that these are the same bodies that Lipschutz has described, but they do resemble his descriptions and plates.

A differential count of the cells from a fresh vesiculo-pustule gave these results:

Polymorphonuclears	71%
Eosinophiles	27%
Mononuclears	1%
Mastcells	1%

The case was carefully studied bacteriologically in the hopes of finding the *Bacillus pyocyaneus*, or some other organism from which a vaccine could be made. Inasmuch as at first we could grow only a very few staphylococci from the early lesions, and not from all of them, we decided to try special media, and Dr. Stewart, of the National Vaccine Company, was good enough to furnish us with acetic agar, human blood serum and Loeffler's serum, but again results were the same: we could nearly always grow the *Staphylococcus albus*, but no other organism.

A catheterized specimen of urine did give a pure culture of the colon bacillus, however.

On April 9th several of the larger pustules were sterilized with iodine and alcohol and the contents drawn off into a syringe; this pus was diluted with normal saline solution and three drops injected as superficially as possible beneath the epidermis in three places. Normal saline was injected as a control in three other places. The next day the control spots had entirely disappeared, but in each of the places where the pus was injected there was apparently a vesicle beginning. Cultures from this pus gave the *Staphylococcus*

albus. Some of the pus was injected into mice, both beneath the skin and intraperitoneally, but at the end of one month both animals were alive and well. One of the lesions produced by autoinoculation **was excised, hardened, sectioned and stained**, and it was found that in the subpapillary portion of the corium there was great œdema and vascular dilatation, and that the blood vessels were surrounded by mononuclear and a few polymorphonuclear cells. The appearance of a vesicle was apparently due to the œdema of the papillæ.

Autopsy was performed twelve hours after death by Dr. Van Swearigen, and the results were as follows:

The pericardium was normal, the heart's blood was fluid and the right heart was somewhat dilated, but the heart muscle was normal. The pleuræ were smooth and glistening and the lungs showed no pathological changes.

The peritoneal cavity was smooth and glistening and there were no adhesions and no congestion. The liver was of the usual size, but upon section was distinctly fatty. The spleen was small, hard and firm. The mucous membrane of the stomach was markedly congested but showed no ulcerations. The intestines and appendix were absolutely normal. Neither the pancreas or gall bladder showed any deviations from normal.

The kidneys showed marked parenchymatous degeneration, the adrenals were normal. The pelvic organs showed no pathological changes. Cultures from the heart's blood, kidney, spleen and uterus showed pure cultures of the colon bacillus.

The symptom complex of this case was somewhat unusual. A patient with an apparent impetigo contagiosa of the scalp and a few vesicles on the body developed, very shortly after the appearance of the eruption, a middle ear abscess. Later persistent vomiting appeared, without any signs of cerebral complications, and blood and albumin were found in the urine. The eruption became much worse, and the patient collapsed and died. The whole appearance was that of an infection, the differential leucocyte count especially suggesting this, and yet at no time was the temperature over 100, and most of the time it was normal. At autopsy a parenchymatous nephritis was found, and the heart's blood was fluid, suggesting a septicæmia. The colon bacillus was isolated from all organs. The cutaneous lesions were autoinoculable.

The following diseases must be considered in the diagnosis of this case: the Osler type of erythema multiforme with visceral manifestations, pellagra, impetigo herpetiformis, impetigo contagiosa, pemphigus and pemphigus foliaceus.

In the type of erythema multiforme described by Osler, there are usually recurring attacks of erythema multiforme, purpura or urticaria, associated with some more general manifestations, as arthritis, bronchitis, nephritis, otitis media, enteritis, endocarditis, meningitis,

hæmorrhages from the nose, intestines, stomach, lungs and kidneys, as well as with fever that may be very high, though rarely of long duration. In my case the previous attacks were construed as impetigo contagiosa, because of the fact that other members of the household suffered from a similar condition. So against erythema multiforme of this variety would speak the fact that this was the first attack showing visceral manifestations, that there was no fever, and that the eruption was not at all of the type described by Osler.

Pellagra might be thought of, because of the persistent vomiting, but the character of the eruption and the lack of nervous manifestations would seem to exclude this malady.

At first the distribution of the eruption suggested impetigo herpetiformis, but the woman was not pregnant, and the individual lesions were large and did not have the close grouping characteristic of this affection.

Impetigo of the bullous variety could only be considered if one decided that the skin infection was a malady separate and apart from the general condition, a theory that hardly seems tenable in view of the collapse being associated with a marked spread of the eruption and a change in type from large bullæ to small pustules.

At first the eruption simulated pemphigus but later changed so as to resemble pemphigus foliaceus; at first it differed from pemphigus foliaceus in that the vesicles were more distended, that they were indurated, and that Nikolski's sign was absent.

Although recognizing that there is frequently no hard and fast line dividing one of these bullous eruptions from another with a totally different name, yet we seem justified, in the light of our present knowledge, in labelling this as an example of pemphigus changing to pemphigus foliaceus.

Ætiologically there are two main types of these bullous eruptions: those depending upon external infection, as impetigo, and those depending upon septicæmia, as the pemphigus of sheep butchers, examples of which have been described by Pernet, Pusey and others. This case would seem to be of too long duration to be due to a septicæmia, and the early appearance of a typical crusted impetigo would suggest that the infection was originally introduced from without, and that the cutaneous lesions were due to an organism, probably the *Staphylococcus albus*. The constant absorption of pus may have so lowered the patient's vitality that a septicæmia with the colon bacillus occurred. The fact that the lesions were autoinoculable with the pus containing only the staphylococcus would point against the colon bacillus being responsible for the

cutaneous lesions. The fact that the autopsy was not performed until twelve hours after the death of the patient somewhat vitiates the importance of the finding of the colon bacillus at postmortem, but the fact that a catheterized specimen of the urine taken some days before death showed that organism, to some extent, offsets this objection. The weight of evidence, then, would seem to show that there was a primary cutaneous infection with the *Staphylococcus albus*, and death from either the absorption of toxins or from a septicæmia with the colon bacillus.

I have now had the opportunity of studying four cases that were objectively pemphigus foliaceus, two true types of the disease, one a case of dermatitis exfoliativa neonatorum (Ritter), and this last case. In the two true cases the bacillus pyocyaneus was considered to be the cause of the diseases, the primary infection being a cutaneous one and introduced from without. In one case death resulted from a septicæmia with this organism. In the case of Ritter's disease, the colon bacillus was found in the blood, although by some this was considered a contamination, and the *Staphylococcus albus* in the vesicles. In all of these cases the organisms were of very low virulence when experimentally inoculated into animals. The question then naturally arises whether there may not be an anaphylaxis on the part of the patient to the toxin from the infecting organism. The fact that other skin infections, as acne vulgaris and sycosis non-parasitica, are very chronic, would seem to show that an infection can be chronic without the necessity of there being an anaphylaxis. Nor does the course of the infection or the mode of death suggest anaphylactic shock, the course being too slow. It would be interesting to sensitize guinea pigs with the serum of a patient suffering from pemphigus and see if the animals were thus rendered susceptible of anaphylactic shock when inoculated with the organism found in the bullæ. Bruck has shown that such an experiment will work very nicely in certain cases of urticaria.

I desire to thank Dr. Gilchrist, Dr. Burbank and Dr. Van Swearigen for much help and advice.

CONCLUSIONS.

(1) In a case presenting at first the symptoms of an impetigo contagiosa, there developed a train of symptoms very like the symptom-complex of the erythema multiformes with visceral complications

described by Osler. However, a diagnosis of pemphigus or pemphigus foliaceus seems justified.

(2) The cause was probably a purely cutaneous infection with the *Staphylococcus albus*, and death was due either to the absorption of toxins or to a generalized infection with the colon bacillus.

(3) Diseases of a totally different ætiology may objectively resemble pemphigus foliaceus; in fact, that name is probably only a convenient label for secondary cutaneous manifestations of various bullous disorders.

(4) The bullous eruptions so grade one into the other that no dividing line is possible; there should be a reclassification based on the ætiology only. Most of these affections are probably bacterial in origin, though the infecting organism may be introduced from without or within.

(5) All cases of pemphigoid eruptions should be studied with special reference to infection. Cultures from the blood, urine and cutaneous lesions should be made at frequent intervals. The agglutinating properties of the blood should be tested, autoinoculation experiments done, and animals inoculated. The possibility of the condition being due to anaphylaxis should be experimentally proven or disproven.

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PLATE XIII.—To Illustrate Article by DR. H. H. HAZEN on A Case of Pustulo-
bullous Eruption Simulating Pemphigus Foliaceus.



Fig. 1.
Showing lesions on chest, abdomen and arms.

DIFFUSE AND DISSEMINATE DERMATOLYSIS: REPORT OF A CASE.

By FRED WISE, M.D., New York, and E. J. SNYDER, M.D., New York.

(From the Department of Dermatology, College of Physicians and Surgeons,
Columbia University.)

CASES of dermatolysis are rarely met with and histopathological studies of the affection are few and far between. A somewhat superficial survey of the literature failed to reveal any definite allusions to cases clinically resembling the one herein described.

Considerable differences of opinion exist as to the classification of the disease. Crocker believes that the term dermatolysis should be restricted to congenital cases, where there is loose attachment of the skin without hypertrophy; he includes the description of the disease under the caption of "fibroma." Stelwagon places dermatolysis under the heading of "hypertrophies." Marcel Sée (*La pratique dermatologique*) mentions the fact that some authors consider the nature of dermatolysis and fibroma molluscum to be identical. Instances of the disease have been reported under such titles as fibroma pendulum, cutis pendula, cutis laxa, pachydermatocele, etc. The condition has been confounded with Unna's cutis hyperelastica, an abnormal elasticity and distensibility of the skin, seen in so-called "elastic skinned" and "India rubber" men, sometimes exhibited in freak museums.

The ætiology of the disease is obscure. It may be congenital, hereditary, or it may be acquired, as in our case. As to the pathology, to quote Stelwagon: "There is much confusion as to the histopathologic findings, owing to the fact that in many instances they have been based upon the formations known as mulluseiform nævus and fibroma. According to Duhring, 'The growth consists of a simple hypertrophy of the integument, including all its parts, especially of the subcutaneous connective tissue. Under the microscope it is seen to consist largely of soft fibrous or lipomatous tissue, or of both in varying proportions.'"

The following case report is of interest, both on account of the rarity of the condition itself, as well as the unusual appearance which it presents.

CASE REPORT.

G. A., a youth of 23, was referred to one of us for diagnosis, by Dr. George A. Wyeth, on Sept. 2, 1913. He is single, a student by occupation, and was born in this country. The father died of old age; the mother became insane during the menopause and died when the patient was four years of age. He was the only child. Neither parent suffered from any cutaneous troubles, to the patient's knowledge. Until the occurrence of the climacteric, the mother was said to have been normal as to mentality. No other members of the family, on

either side, had ever shown a condition of the skin resembling his own, as far as the patient knew.

PERSONAL HISTORY. He had had the usual diseases of childhood, none of which apparently left any permanent morbid changes. Physical and urine examinations proved negative. He was markedly neurotic in temperament, but otherwise in fair health.

Four and a half years ago, he acquired syphilis (penile chancre) and received mercury and potassium iodide by mouth, over a period of two and a half years. In January, 1913, he received an injection of salvarsan. In August, another injection was administered by Dr. Wyeth, who, on seeing the eruption on the patient's back, recognized it to be of a non-syphilitic character. The patient had no definite knowledge as to when the changes on the back and arms first began to manifest themselves, but stated that he believed they appeared subsequent to the fading of the maculo-papular syphilide; that is, about four years ago. This part of his history was indefinite and uncertain, but he seemed to be quite positive that the condition followed the appearance of the chancre, after an interval of six to eight months.

Very little information as to the beginning, course and evolution of the lesions could be gained from the patient. According to his statements, the lesions began as raised, red spots which never scaled, did not itch and caused no discomfort whatever. The first spots appeared over the lower dorsal vertebræ.

STATUS PRÆSENS. The eruption involves the skin of the back, from and including the nape of the neck, down to the waist, and also the backs of the arms (Fig. 1). It is most marked on the sides and back of the neck and over the lower dorsal and upper lumbar vertebræ. Over the last-named areas the lesions are diffuse. On other parts of the back, as well as the arms, the lesions are discrete and disseminate. The diffuse areas are the result of the coalescence of single lesions (Fig. 2). On the sides and back of the neck, the eruption consists of a multitude of slightly raised, very soft, wrinkled, irregularly rounded, oval and elongated papular elements, varying in size from a lentil to a large pea, the color of the skin remaining unchanged. These lesions are largest and most numerous at the nape of the neck, gradually diminishing in size and number at the sides of the neck and toward the shoulders. The follicular orifices are markedly enlarged in the affected areas. Over the dorsal vertebræ, a narrow, elliptical, diffuse area is seen, similar in character to the above, but less prominent, less wrinkled and with a uniformly smooth surface. Over the lumbar vertebræ is an area composed of closely disposed lenticulo-papular elements, many of which have coalesced in the centre of the patch, where the condition has again assumed the diffuse character seen above (Fig. 2). The color of the skin in these areas is practically normal. The mouths of the follicles and sebaceous glands are universally enlarged.

On the sides of the neck, portions of the back, the shoulders, the flanks and the posterior aspects of the upper arms, the lesions consist of pinhead to pea-sized, soft, slightly elevated, rounded, ovoid and elliptical papules, more or less thickly scattered over the regions mentioned. They are most numerous on the skin below the shoulder blades, less so over the scapulæ themselves, and rather thickly sown over the backs of the upper arms. These somewhat elongated lesions show a distinct tendency to arrange themselves so that their long axes follow the lines of cleavage of the skin; this appearance is most marked just below the shoulder blades and over the backs of the arms, near the axillæ. The color of these disseminate lesions is slightly lighter than that of the surrounding skin. To the palpating finger, the diffuse areas have a peculiar doughy, unctuous feel, as if the lesions had been partially filled with air or water, or contained soft, gelatinous masses. The disseminate elements, however, are firmer and harder to the touch, the skin over them being more tense.

Scattered here and there on the back, are a few dark-yellow freckles and

PLATE XIV.—To Illustrate Article by DR. FRED WISE and DR. E. J. SNYDER, on
Diffuse and Disseminate Dermatolysis.



Fig. 2.

A closer view. Showing the confluent lesions over the lumbar spine and the well-marked follicular orifices.



Fig. 1.

Showing confluent lesions over the spine and back of neck, and disseminated lesions of the back.

PLATE XV.—To Illustrate Article by Dr. FRED WISE and Dr. E. J. SSVYDUG, on
Diffuse and Disseminate Dermatology.

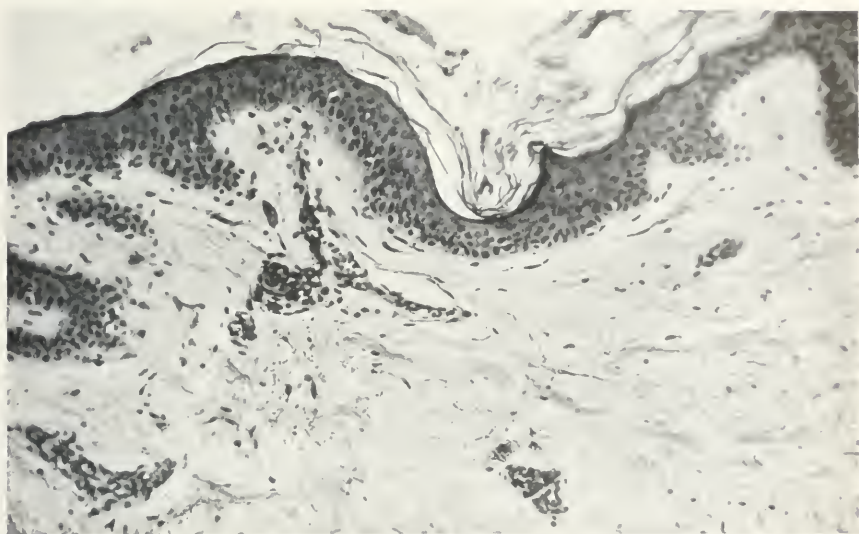


Fig. 3.

Showing atrophy of the epithelial layer and hypertrophy of the collagen.

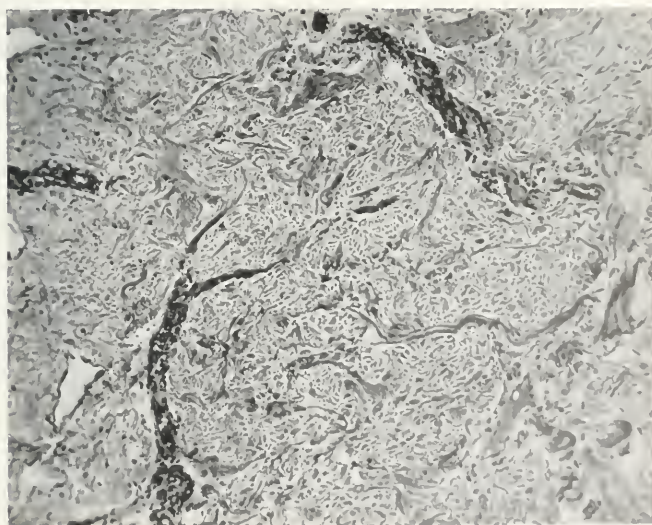


Fig. 4.

Showing dilated vessels in the corium and myxomatous-like connective tissue.

three or four larger lentiginous lesions. None of the lesions shows any tendency to pedunculation. The skin of the rest of the body is normal in appearance. Subjective symptoms are entirely absent.

HISTOPATHOLOGY.

(The following histological report is from the Dermatological Laboratory of the Vanderbilt Clinic, Columbia University.)

The specimen was removed from the back of the neck under local anaesthesia with a ½% solution of cocaine hydrochlorate, fixed in equal parts of 10% formalin and Zenker's solution, dehydrated in acetone, cleared in benzol, infiltrated and imbedded in paraffin, cut and stained with hamatoxylin and eosin, polychrome methylene blue and Weigert's and Hansen's combined stain.

The epithelium appeared in distinct folds. The stratum corneum was somewhat thinned, excepting in the furrows formed by these folds. The layers of the stratum lucidum were split into longitudinal planes. The stratum granulosum consisted of one distinct layer of cells. The epithelium in general was of normal thickness, the papillae showing no abnormality, with the exception of the bottom of the furrows, in which the stratum spinulosum was greatly atrophied, the intracellular spaces being nearly obliterated, the protoplasm diminished and the nuclei of the cells almost in contact with each other. In the depressions formed by the folds, the epithelium was reduced to five or six layers in thickness; the basal cells, instead of being of the columnar type, were flattened and cuboidal; the papillae in these areas were totally absent. Scattered throughout the deeper layers of the epithelium were a few small mononuclear cells, their nuclei being irregular in shape, their protoplasm failing to take the stain.

No distinct subepithelial basal layer was present. The pars papillaris showed marked oedema; the blood vessels were widely dilated, some filled with blood cells, others with serum. The lymph spaces were widely dilated. The connective tissue was made up of fine, swollen and homogeneous fibres, staining poorly. This oedematous tissue recalled the myxomatous structure forming the umbilical cord. A few plasma cells and a few small fibroblasts were scattered throughout this layer, the former being more numerous around the blood vessels. There was very little endothelial proliferation. There was a general decrease in the amount of elastic tissue, being more diminished beneath the atrophied portions of the epithelium.

The pars reticularis also was oedematous, the blood and lymph vessels showing the same conditions as in the layer above. The connective tissue fibres were somewhat homogeneous, widely separated and exhibited poor staining properties. These myxomatous connective tissue bundles were hypertrophied and between them were seen strands of similar structure, disposed in oblique and transverse fashion. The elastic tissue was diminished, oedematous, and showed multiple fractures. The walls of the blood vessels also showed a diminution of elastic tissue. The nerve fibres showed no changes, save those of oedema. The hair follicles, sebaceous and coil glands were hypertrophied. The arrectores were oedematous; the panniculus adiposus was entirely absent.

In reviewing these findings, we are at a loss to account for the atrophy in the epithelial layer. In the corium, the most salient features were the hypertrophy and myxomatous appearance of the collagenous tissue. The loss of the panniculus adiposus may be attributed to the fact that the increase of the oedematous collagenous tissue has displaced the fat cells.

This condition, then, appears to be essentially non-inflammatory, but

consists of a myxomatous degeneration and a diffused, tumor-like formation, taking place in the corium.

That we are dealing here with a condition closely allied to von Recklinghausen's disease (fibroma molluscum), there can be little doubt. It may not be unlikely, indeed, that these lesions actually represent the earliest phases of that disease. It is a noteworthy fact that cases have been described of fibroma molluscum, associated with dermatolysis, the extreme cases of this type giving rise to the appellation "elephant man" (Stelwagon).

The fact that these lesions did not make their appearance until the patient had become infected with syphilis, must be looked upon as a coincidence. The secondary maculo-papular eruption was generalized in its distribution and the present changes in the integument apparently bear no topographical relations to the preceding luetic eruption.

CLINICAL REPORT.

NOTE ON THE ASSOCIATION OF PRURITUS WITH CRURAL ALOPECIA.

By BERNARD WOLFF, M.D., Atlanta.

MANY men, when they arrive at middle life, observe that the hair which normally covered the lower extremities to a greater or lesser extent, has entirely disappeared or become very much diminished in quantity, from the knee to the ankle. If the loss of hair is not complete, the former growth is represented by a fringe encircling the limb just above the knee and another above the ankle and sometimes in addition, by a sort of peninsula projected downward for a short distance over the anterior tibial region. With the exception of these remnants, the skin of the leg is hairless. On examination, the depilated skin is seen to be sleek, smooth, rather feminine in type, normal in color or slightly reddened and quite free from any visible evidence of disease. At times, instead of being smooth, it may show a fine reticulation or a slight furfuraceous scalliness. To the touch it is soft and pliable.

The alopecia is gradual in its course, the hairs being noted to fall out in winter, to return in summer, but in constantly diminishing numbers, finally ending in more or less complete baldness. The forearms may or may not be similarly affected. The growth of hair on the dorsum of the foot and toes and upon the hands and fingers, which is subject to individual variations, is in no wise compromised but at times appears to be even more pronounced than in earlier adult life.

Crural alopecia is seen chiefly in stout, middle aged men of the type

to which the term plethoric was formerly applied. It may occur in individuals of different type, but in no instance have I seen it in men under thirty years of age. I have so often noted the association of pruritus with this condition of crural alopecia as to be convinced of their morbid correlation. The itching, which is as a rule limited to the lower extremities, is present only during the cold months and tends to spontaneous disappearance on the advent of warm weather. In this respect, it resembles or is identical with the type of pruritus described as pruritus hiemalis. As to daily variations, it is much worse at night when the patient removes his clothing. It gives very little annoyance during the day. The pruritus may occur with seasonal preferences at any time during the slow march of the alopecia but is more intense when the process is complete. Alopecia may occur without pruritus but, on the contrary, pruritus without alopecia is quite exceptional.

The cause of the alopecia and its associated pruritus is merely conjectural. Friction or mechanical irritation from heavy underwear or the wearing of constricting garters may be advanced as possible but not satisfying explanations. The condition may be due to nutritional changes, occurring with the advance of years in the most dependent portion of the body or again it is possibly physiological, corresponding in its defluvial phase to the type of baldness which occurs upon the scalp in middle age. But whatever be the essential cause of the alopecia, numerous personal clinical confirmations have established, in my experience, an undoubted connection between it and recurring localized pruritus.

If attention has been called heretofore to this syndrome, it has escaped me and in consequence this note, though of minor importance, is offered for whatever of interest it may contain.

SOCIETY TRANSACTIONS

NEW YORK DERMATOLOGICAL SOCIETY.

JOHN A. FORDYCE, M.D., *President*.

Regular Meeting, October 28, 1913.

ACRODERMATITIS CHRONICA ATROPHICANS. Presented by DR. MACKEE for DR. FORDYCE.

The patient, a woman, 54 years of age, was from Dr. Wise's service at the Vanderbilt Clinic. She was born in Germany and had been in this country for 28 years.

FAMILY HISTORY. Negative.

PAST HISTORY. With the exception of the usual minor complaints the patient had been always healthy until the beginning of her acrodermatitis 12 years ago. A short time subsequent to this she was found to be suffering from diabetes.

Her skin disease began as an erythema on the dorsal surfaces of the feet. This slowly spread up the anterior and posterior surfaces of the legs to the waist line. As it progressed upward it was replaced by atrophy. There was, also, some ulceration over the ankle joints.

Two years ago an erythema developed on the dorsa of the hands and spread up the extensor surfaces of the forearms to the elbows.

There had been no marked subjective symptoms—only a little pain in the ulcerated areas.

CONDITION UPON PRESENTATION. The patient was a heavy, robust woman of fair complexion. There were ulcerative areas on the outer surfaces of both feet just below the external malleoli. The skin of the entire lower extremities was markedly atrophic. Below the knees it was bound down and so translucent that the veins could be plainly seen. Above the knees the skin was loose and presented a marked example of the so-called "cigarette-paper" wrinkling. Here, the erythema was still present and there was a fairly well-marked line of demarcation at the upper part of the buttocks. Deep-seated, split-pea-sized, hard nodules were scattered over the thighs. These could be palpated but not inspected.

The skin of both hands and wrists was slightly atrophic. An erythema was present on the forearms. The urine gave a reaction for sugar; the Wassermann reactions, conducted by Drs. Jagle and Zinsser were positive.

HISTOLOGICAL EXAMINATION (from the DERMATOLOGICAL LABORATORY). The stratum corneum showed a hyperkeratosis of a laminated form, being separated into many sheets. There was a total absence of parakeratosis. There was a marked thinning of the remainder of the epidermis with complete absence of papillæ. The cells of the stratum spinulosum showed marked vesiculation. The subepithelial basement membrane was poorly defined.

The upper part of the dermis was composed of a very œdematous, widely separated, fine connective tissue, throughout which were scattered plasma cells and small mononuclear cells.

The blood vessels presented a marked endothelial proliferation with thickening of the walls.

The deeper part of the dermis consisted of large bundles of swollen fibrous connective tissue, in some areas assuming a nodular form. Scattered throughout the deeper dermis was the same type of cell infiltration as found in the upper layer, but to a lesser degree. Here, there was a more marked thickening of the vessel walls, some of the capillaries being entirely obliterated. Subcutaneous fat was present.

Elastic fibres were absent in the pars papillaris, while in the pars reticularis the elastic tissue was greatly reduced in amount and the fibres showed marked atrophy and cloudy swelling.

CASE FOR DIAGNOSIS. Presented by DR. WINFIELD.

The patient, E. R. C., was a physician. His father and mother died of pneumonia; one aunt died of pulmonary tuberculosis, and another of carcinoma. A sister died of typhoid fever, also a brother. The patient had had mumps and measles and had suffered from chronic bronchitis for the last two or three years; otherwise had enjoyed excellent health; used alcohol in moderation; smoked to excess. Five years ago he sustained a severe sprain of the right shoulder; and four years ago, a similar sprain of the left shoulder.

His present trouble was first noticed about the middle of July, 1913. There was an itching, burning sensation deep in the tissues of the right index finger; this sensation was aggravated by pressure. A few vesicles formed on the thumb, index and middle fingers. These vesicles did not burn, itch, or pain in any way, and lasted only a week or ten days. Later on, the end of the index finger be-

came very sensitive and the tension of the tissues was increased; at times it would become blue and the temperature of this finger was decidedly decreased. About the latter half of September, the skin was found to be thickened; later, this dried, shrivelled and scaled. About the same time, the burning and itching sensations appeared in the right thumb, but this finger had not become tender nor had it been blue, though the temperature was much below that of the other fingers. The condition was made worse by exposure to cold, the index finger sometimes getting very blue and the burning and itching sensation in the thumb becoming aggravated. The physical examination was negative. The Wassermann reaction was negative. Physicians in Philadelphia had made a tentative diagnosis of beginning Reynaud's disease, but the condition was practically confined to one side. The only skin changes was a thickening around the nails; there was no blueness except when the hands were cold and then they were waxy rather than blue. Dr. Winfield thought the condition was some form of neuritis.

RECURRENT BULLOUS ERUPTION. Presented by Dr. FORDYCE.

The patient was a young woman who had been previously shown before the Society. Her trouble began about five years previously as a bullous affection of the mouth and skin, following an inflammation of the right wrist. In addition to the bullæ, she had coincident or alternating attacks of erythema multiforme and purpura. Bullæ developed both spontaneously and after traumatism; the outbreaks were non-pruritic. The blood count was normal.

DISCUSSION.

Dr. TRIMBLE said that when he first saw the patient he thought the condition looked like an epidermolysis bullosa and that it might be considered to be that affection. He was aware that epidermolysis bullosa was considered to be a congenital disease, but some cases might not be noticed in childhood and become apparent later.

Dr. ELLIOT also thought the case one of epidermolysis bullosa. That it was on the mucous membrane of the mouth would not exclude the diagnosis. He had had cases of epidermolysis in which the bullæ had occurred on the glans penis, and also on the mucous surfaces of the labia after sexual relations.

Dr. MACKEE considered that the radiographic findings were significant. The radiographic examination demonstrated the absence of tuberculosis or syphilis and showed a destruction of the articulation, with ankylosis as a result of a septic arthritis.

Dr. FORDYCE said that it was very easy to call the condition a pemphigus or epidermolysis bullosa, but such names indicated nothing regarding the essential nature of the condition. It seemed to him that it was much more rational to assume that following the infection of the wrist joint the patient's skin had become sensitized to some bacterial or chemical product which had rendered her susceptible to these outbreaks.

CASE SHOWING RESULTS OF TREATMENT FOR DISSEMINATED LUPUS ERYTHEMATOSUS. Presented by Dr. TRIMBLE.

This patient had been shown before and the consensus of opinion then was that it was disseminated lupus erythematosus. That was about one year ago. The patient was presented as a practically cured case. He had had lesions on his forearms, shoulders and chest, and his whole face was covered. He still had a mild pigmentation.

The treatment consisted of salicylic acid ointment in increasing strength and scrubbing with green soap. The patient had also received two to ten grains of

quinine three times a day. When ringing in the ears developed, this dosage would be stopped, and then gradually increased again. The quinine seemed to have been of marked benefit.

DISCUSSION.

DR. HOWARD FOX said that the result was remarkably good. He had seen the patient the year before in Dr. Jackson's clinic, and could hardly recognize him to-night. His face had been very much swollen and they had not been able to do anything for him.

DR. JACKSON said that the case showed a very excellent result, but that it was a question whether it was cured by the external or the internal treatment.

DR. FORDYCE said that he did not recall the appearance of the case when it was first presented. If the eruption had been a lupus erythematosus he would expect to see some evidence of scarring. The case showed none at all.

PURPURA ANNULARIS TELANGIECTODES (MAJOCCHI). Presented by DR. MACKEE for DR. FORDYCE.

The case was from Dr. Wise's service at the Vanderbilt Clinic. The patient was a man; 22 years of age; single; waiter by occupation; born in Greece; had been in America 6 years.

FAMILY HISTORY. His father was living and in good health. His mother died in childbirth at the age of 35. He had 4 brothers who were all living and in good health. There never had been any skin disease in any member of his family.

PAST HISTORY. Besides the usual diseases of childhood the patient stated that he had never been ill previous to the disease for which he sought relief at the Clinic. Four months ago he noticed an itching sensation on both legs, especially at night. A few weeks later he observed some red "spots" on the anterior and inner surfaces of the right leg below the knee. The lesions soon spread over the entire lower leg, ankle and foot and similar lesions developed on the corresponding parts of the opposite limb.

In a few weeks the itching disappeared, desquamation occurred and the lesions gradually faded, leaving some pigmentation. Three weeks before coming under observation the itching again appeared and this was followed, in about ten days, by a development of new lesions.

CONDITION WHEN PRESENTED. The cutaneous affection occupied the lower two-thirds of both legs and the dorsa of the feet. It was most marked on the anterior and internal surfaces of the legs and external surfaces of the feet. In general, the eruption produced the appearance of purpura, but on close inspection several types of lesions were observed.

Almost the entire outer surface of the right leg was the seat of a patch of coalesced, lentil to dime-sized, roughly circular, light-brown macules. The centres of the individual lesions were slightly depressed and apparently atrophic. The patch as a whole, besides having a brownish color, possessed an indistinct violaceous hue.

Discrete pigmented and atrophic lesions could be demonstrated on both legs and feet.

Over the other areas were three types of lesions. The most striking was the annular lesion, of which there were 50 or more. These consisted of ring-shaped macules having a red border and a pink or slightly pigmented and apparently atrophic centre. The blood vessels could be seen in the periphery of some of the lesions and in no instance could the color be overcome by the use of the diascope. These lesions were very slightly scaly. They ranged in size from a lentil to a ten-cent piece.

The second type of lesion consisted of slight ulceration or necrosis in the periphery of a few of the annular lesions. The third type was the so-called magenta or cayenne-pepper spots, or minute red puncta of which there were many. These apparently were the primary lesions.

Besides the itching the patient complained of pain, especially upon standing or walking.

HISTOLOGICAL EXAMINATION (from the DERMATOLOGICAL LABORATORY). Annular lesion. In the centre of the lesion the epithelium consisted of only 2 or 3 layers of cells, with the inter-papillary bodies greatly reduced in length. There was a marked œdema of the stratum filamentosum. The papillary and corionic layers showed marked œdema. Red blood cells were scattered through the upper dermis and extended into the epithelium. Immediately below the epithelium there were many dilated small blood vessels. In circumscribed areas, in the dermis, were groups of new-formed blood vessels, with marked plasma-celled infiltration surrounding them. Some of these vessels were thrombotic. There was a reduction in the amount of elastic tissue.

Pigmented, Atrophic Lesion. There was a marked atrophy of the epithelium and considerable shortening of the interpapillary bodies. There was a pronounced increase in the number of capillaries and blood vessels in the dermis which were arranged in groups. Thrombosis was a marked feature and there was an extensive perivascular infiltration of plasma cells and lymphocytes. Deep in the dermis were extravasations of red blood corpuscles which, through degeneration, had left considerable pigmentation. There was a marked diminution in elastic tissue throughout the dermis, with almost a total absence around the groups of blood vessels. The elastic fibres showed cloudy swelling.

Dr. MacKee thought that the clinical as well as the histological picture would separate this affection from angioma serpiginosum and make the disease an entity.

CASE FOR DIAGNOSIS (PARAPSORIASIS?). Presented by DR. HOWARD Fox.

The patient was a man about 35 years of age, born in the United States, a chauffeur by profession. Twenty-two months ago, he contracted syphilis and presented a chancre, adenopathy, macular eruption and a positive Wassermann reaction. He was then given an intravenous injection of salvarsan and a second injection two months later, combined with internal administration of mercury. About a year ago, the present eruption appeared, which had gradually increased in size up to the time of presentation. It consisted of dime-sized, pale fawn-colored macules, situated chiefly on the trunk. There was no appreciable infiltration and no objective evidence of itching. The patches had a shiny, somewhat wrinkled appearance and were devoid of scales. The patient stated, however, that a slight scaling was present when he was unable to bathe frequently. There were a few slight reddish patches of dermatitis upon the arms, probably due to inunctions of mercury. There was also a mild acne of the back. When first seen, the eruption suggested a *tinea versicolor* and the patient was treated by soap and hyposulphite of soda, with no effect. The possibilities of parapsoriasis and of *mycosis fungoides* had been considered. No biopsy had been made. The patient had recently received his third injection of salvarsan. His general health was apparently good.

DISCUSSION.

DRS. JACKSON and JOHNSTON thought it was a case of *parakeratosis variegata*.

Dr. ELLIOT considered the case to be an example of erythrodermic pityriasisque en plaques disséminées of Brocq.

DR. TRIMBLE said that the case looked very much like one of parapsoriasis. He could not, however, reconcile the symptom of itching with that disease.

PEMPHIGUS OR EPIDERMOLYSIS BULLOSA (?); ARSENICAL PIGMENTATION. Presented by DR. MacKEE for DR. FORBYCE.

The patient was from Dr. Wise's service at the Vanderbilt Clinic. He was 39 years of age; born in Austria; 24 years in America; married; tailor by occupation.

FAMILY HISTORY. His father died of heart disease at the age of 64. His mother was living and in good health. His wife was living and in good health. He was the father of 6 healthy children, the eldest of which was 14 years of age; the youngest was 3 years of age. No member of his family, immediate or remote, ever suffered from a skin disease.

PAST HISTORY. In infancy, and up to the third year, he was afflicted with eczema of the face, scalp and hands and occasionally there were scattered patches over the body. During adolescence he was troubled with attacks of furunculosis.

One year ago he developed an acute, vesicular eruption behind the ears. This spread to the chin and neck and was diagnosed as "impetiginous eczema" and was treated with a "dark-colored" salve. This vesiculo-crustaceous and pustular eruption spread over the face and a few days later vesicles and bullæ developed in the axillæ, genital region and buttocks. This was shortly followed by palm-sized bullæ on the inner surfaces of the feet and a vesicular eruption developed upon the forearms. Three months subsequent to this a generalized bullous eruption appeared which was followed, in two weeks, by the formation of bullæ in the mouth.

At first the lesions appeared spontaneously and developed upon clinically unaltered skin, but almost 8 months ago he noticed that traumatism would produce a bulla. This tendency finally became very marked—the slightest injury—even the pressure of a seam or fold in the clothing, would give rise to a bleb. In the early stages of the disease the bullæ were globular, tense and contained clear serum, but subsequently many of them were irregular in outline, hæmorrhagic and less tense, i.e., flaccid.

He was in the Skin and Cancer Hospital for 5 weeks, during which time he was given large doses of arsenic by ingestion (Fowler's solution). Shortly after this he noticed the generalized pigmentation. Since the onset of the disease he had lost 25 pounds in weight, reducing from 132 to 107 pounds.

CONDITION WHEN PRESENTED. The patient was emaciated and showed, by his facial expression, that he had suffered considerably. He walked with difficulty because the friction of his shoes or clothing produced lesions. When the patient was undressed the first thing that attracted attention was the almost universal deep-brown pigmentation. This was not a mottling, but a uniform distribution of the pigment over the entire cutaneous surface, excepting the face, scalp, palms and soles. Another striking feature was the apparent depigmentation wherever a bulla had been. This generalized pigmentation with areas of paler skin gave somewhat the appearance of leukoderma. The pigmentation had been growing less for several weeks. On the dorsal surfaces of the hands and feet, especially the fingers, the lobes of the ears and scattered here and there over the body, were milium-like cysts (epidermic cysts) singly and in groups. These were usually in or close to the areas of depigmentation. The skin in these areas was slightly atrophic. The hands, particularly the dorsal surfaces, were covered with a cutaneous envelope that was markedly atrophic. The skin of the palmar surfaces was wrinkled, atrophic and there was a troublesome hyperidrosis. The skin at the ends of the fingers was so thin that the papillæ could be seen with the naked eye.

There were several bullæ on the hands, one on the left knee, one on the

right foot and one on the left shoulder. Two of these lesions were hemorrhagic and they all were produced by traumatism. They ranged in size from a dime to a silver dollar and were rather flaccid. Some were round while others were irregular in outline. There were several blebs and excoriations in the mouth and about the anus. There was, also, one large bulla on the glans penis.

It was impossible for the patient to masticate and painful for him to defecate and difficult to urinate.

Firm pressure for one second would so modify the cutaneous envelope that the epidermis could be removed en masse. Occasionally the urine would find its way between the corium and epidermis of the glans and a large bulla would be the result.

The patient's pulse was usually about 88; the evening temperature was irregular, the highest recorded being 101°F. The urine showed slight albuminuria, a few hyaline casts and a rather marked indicanuria. Specimens of tissue removed for histological study were, unfortunately, lost. The blood showed an eosinophilia of 5%.

While nearly all of the blebs that had developed in the last few months were due to traumatism, the patient thought that occasionally one would develop spontaneously.

CASE FOR DIAGNOSIS. Presented by DR. TRIMBLE.

The patient, a man 63 years of age, had a peculiar eruption located in the left groin, right forearm and over the lumbar region. The lesion on the back covered the whole lumbar region, the others varying in size from that of a silver dollar to an orange. The border was irregular and serpiginous, the patches clearing in the centre, leaving a dense pigmentation. The active border, which was about an inch in width, was covered with small pustules. The eruption did not itch; the duration was two months; it began on the left forearm. The patient stated that he had a similar attack in the right axilla three years ago.

DISCUSSION.

DR. JACKSON thought it was a typical case of syphilis, showing, as it did, the spreading, raised, scalloped borders and clearing centres. There were also several broken circular lesions, which he regarded as being suggestive of the disease.

DRS. ROBINSON and ELLIOT regarded the case as one of syphilis.

DR. TRIMBLE said that syphilis was the first diagnosis considered. At first there were large blebs surrounding the lesions on the back. The bullous syphilide was rather rare and he could not recall that he had ever seen a case; also, the duration of the condition was very short for such an extensive syphilitic eruption—only two months. He did not feel satisfied with that diagnosis and thought that it was probably some parasitic disease. The man had had no treatment and he would try what antisyphilitic treatment would do. The Wassermann reaction was negative.

EPITHELIOMA CURED BY INTENSIVE ROENTGEN RAY TREATMENT. Presented by DR. MACKEE.

The patient, a man of 50 years, had been treated by Dr. Remer in the Dermatological Roentgen Laboratory of the Vanderbilt Clinic. He had been referred for treatment by Dr. Winfield. The man was a luetic and 20 years ago he had several ulcerating gummata, one of which was on the right side of the neck in front. The epithelioma developed in the scar of this lesion 12 years ago. When he first came under observation there was a deep ulcer, the size of a

silver dollar, with deep induration at the margin. The muscular tissue was involved.

HISTOLOGICAL REPORT, BEFORE TREATMENT (from the DERMATOLOGICAL LABORATORY). There was a dense infiltration of basal cells extending throughout the dermis and into the subcutaneous tissue. Between the areas of infiltration was a large amount of myxomatous-like tissue. There was a marked perivascular infiltration consisting of plasma cells and small mononuclear leucocytes.

On July 3, 1913, he was given one treatment consisting of 8 Holzkmeech units of a Benoist No. 9 ray. This was followed by rapid involution of the lesion. Three weeks after the treatment and while the erythema was still present, another piece of tissue was removed for histological examination.

HISTOLOGICAL REPORT THREE WEEKS AFTER TREATMENT. There was a generalized oedema of the epidermis and a complete loss of interpapillary bodies with flattening of the papillae; also a marked mitosis in the stratum filamentosum. The carcinomatous cells and the myxomatous-like tissue in the corium had completely disappeared. In their place was a new-formed, oedematous connective tissue with many large, dilated, thin-walled blood vessels. Large numbers of plasma cells, small lymphocytes and a few mast cells were scattered throughout the dermis. The former marked perivascular infiltration was much reduced.

The patient made an uneventful recovery. After the lesion had entirely healed a prophylactic treatment, consisting of 6 Holzkmeech units of a Benoist No. 9 ray was administered. When presented to the Society there was a smooth white scar with no clinical evidence of disease.

ACNE CACHETICORUM. Presented by DR. MacKEE for DR. FORDYCE.

The patient, a man of 22 years, had been under observation only one day in Dr. McMurtry's service at the Vanderbilt Clinic. The man was a phthisic. He stated that he developed his skin disease six months ago, but there were clinical evidences of a much longer duration.

Scattered over the face there were many scars, comedones and indurated pustules. Distributed over the entire back, chest, upper arms and neck were numerous comedones and small indurated pustules. Over the scapulae, the lower portion of the neck and the centre of the back, as far down as the waist line, were numerous ulcers ranging in size from a split pea to a silver dollar. There were several areas where two or more ulcers had coalesced resulting in a lesion with a diameter of nearly 3 inches. The chest, particularly on the left side, and over the sternum, presented the same appearance. There was considerable scarring and pigmentation from former lesions. While a few of the ulcers presented a "punched out" appearance, most of them had undermined and ragged, irregular edges. So far as could be ascertained, neither iodides nor bromides had been taken by the patient.

LUPUS ERYTHEMATOSUS DISSEMINATUS. Presented by DR. TRIMBLE.

This case of disseminated lupus erythematosus was a counterpart of the case shown by Dr. Trimble on the same evening when that case was first seen a year ago. It was an exactly similar condition, with the same clear space around the mouth. The condition was of eleven months' duration and had been treated at various clinics. It was now under exactly the same treatment as the first case presented. It had shown a little improvement in the two months' time that it had been under observation. There was some pigmentation which seemed to be associated with the disease. There were, also, some lesions in the mouth.

NEW YORK ACADEMY OF MEDICINE,

SECTION ON DERMATOLOGY.

Regular meeting, April, 1913.

WILLIAM B. TRIMBLE, M.D., *Chairman*.

BAZIN'S DISEASE. Presented by DR. HEIMANN.

Miss M. B., 22 years old. The mother died of pulmonary disease and was nursed by the patient. Her past illnesses were irrelevant, save that five years ago she had tubercular cervical glands, for which she was operated upon four times. Before the operations she had night sweats, no cough. The last operation was performed last July. The present illness began three months ago with painless, red swellings on her left foot. These swellings were tender. Her lungs were found negative by Dr. Norton. Her temperature ranged from 101° F. in the morning down to about 100° F. in the evening. She was improving under tuberculin administration. The injections did not modify the temperature curve, but evoked a marked local reaction.

LUPUS ERYTHEMATOSUS OF THE LIP. Presented by DR. BECHET.

Mr. T. H., 26 years of age. Trainman by occupation. About five years ago he first noticed a small scaly patch on the right side of the lower lip. The lesion had never disappeared since, but on the contrary had slowly spread, gradually assuming the appearance shown. There was a thickened, scaly patch, covering two-thirds of the lower lip, with some slight evidence of a tendency to central atrophy. Within the concha of the left ear there were several small scars and one or two active lesions. The upper lip was normal. The continuous application of a six per cent. ointment of salicylic acid had had no appreciable effect on the lesion.

LUPUS ERYTHEMATOSUS. Presented by DR. TRIMBLE.

The patient, a woman, 55 years old, had lesions on the face, scalp and tongue. The disease had been present on the face and scalp for a number of years, but those on the tongue had existed only 6 months. She was presented mainly on account of the mucous membrane lesions.

URTICARIA PIGMENTOSA. Presented by DR. TRIMBLE.

The patient was a boy, 6 years of age. The duration of the disease was 5½ years, and it had increased in intensity. The whole body, excepting the neck and face, was covered with yellowish-brown lesions, varying in size from a small pea to a silver quarter. Some of them were quite yellow and looked very much like xanthoma. Itching was not a marked feature.

BLASTOMYCOSIS. Presented by DR. TRIMBLE.

The patient was a man, 24 years old. He was of Italian parentage. Situated on the right buttock was an indurated verrucous lesion about 4 inches long and

2 inches wide. It was filled with cutaneous abscesses and the duration was about one year. Upon histological examination the blastomyces were discovered; the specimen was also shown.

DR. CLARK suggested treating with iodine locally and iodides internally.

DR. POLLITZER suggested cataphoresis.

XANTHOMA TUBEROSUM. Presented by Dr. D. M. ORLEMAN ROBINSON.

M. L., male, 8 years old; there was no history of any cutaneous disease, either in parents or in the children, also, as far as known, no case of diabetes.

The patient was well developed and well nourished. At the age of 1½ years he had an attack of diphtheria, necessitating intubation.

The eruption commenced at the age of 2½ years, first appearing upon the buttocks and shortly afterwards upon the heel of the right foot. There were seven lesions upon the right buttock, six upon the left buttock, one upon the right heel and a small, recent one near the elbow of the right arm. All of the lesions commenced as small pea-sized ones and subsequently increased in size. There was a large pea-sized lesion on the buttock of the right side, sharply limited, elevated, somewhat reddish in color, with a yellowish tinge which was well shown upon pressure. The six lesions on this side, situated about four inches from the anus, were grouped in a circular arrangement, and varied in size from that of a ring finger nail to that of a large thumb nail. They were sharply limited, elevated considerably above the general surface, had a flattened surface and were of a markedly yellowish straw color and felt fairly firm to the touch. They were not formed by a coalescence of a number of lesions, but each one represented an enlarged previously pea-sized lesion. The lesions on the left buttock corresponded in location with those upon the right side and presented a similar arrangement and appearance. The lesion upon the foot was located over the attachment of the tendo achilles to the os calcis, was rounded in form and about the size of a filbert. It was not flattened but had a rounded surface and was somewhat firmer in consistence than the other lesions, but of a similar color.

Examination of the urine showed absence of sugar. A blood examination had not yet been made.

DR. POLLITZER pointed out that the interest in the case lay in determining the underlying metabolic disturbance. This would probably be expressed by the presence in the blood of fatty acid esters of cholesterin. The passage of the latter into the skin excited the cutaneous lesions. Such a determination would be of value, since spontaneous involution at times occurred, possibly based upon metabolic changes favoring such involution.

REVIEW
OF
• DERMATOLOGY AND SYPHILIS.

Under the direction of

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Assisted by

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ARCHIV FÜR DERMATOLOGIE UND SYPHILIS.

(April, 1913, cxvi, No. 2.)

Abstracted by UDO J. WILE, M.D.

EXPERIMENTAL AND CLINICAL STUDIES OF THE CUTANEOUS
REACTION AND ANAPHYLAXIS IN SYPHILIS. II. NAKANO, p.
281.

The work in this article is divided into three parts. The first concerns the cutaneous reaction and its relation to human beings and laboratory animals, the reaction being elicited with the extract of syphilitic liver, pure cultures of the spirochætæ, and filtrates of the spirochætæ pure cultures. The second is descriptive of gummatous manifestations and antecedent anaphylaxis. And the third part is descriptive of experimental anaphylaxis. The conclusions drawn from each of these studies with experiments are as follows:

1. With human beings one can elicit reactions with extracts of syphilitic organs, and a strongly positive cutaneous reaction can be obtained by previously injecting such substances subcutaneously. The author's experiments dealing with the cutaneous reaction and anaphylaxis in animals are summed up in the following conclusions: (1) The anaphylaxis elicited by extract of syphilitic liver is similar to that caused by any albuminous substance. (2) The local sites of reinjection with extract of syphilitic liver show allergic phenomena as evidenced by marked induration and redness, lasting for a considerable length of time; whereas reinjected areas in which normal extract was used for the second injection show no such reaction.

2. Interesting experiments by Nakano are set forth attempting to determine the pathogenesis of gummatous changes in syphilis. He injected patients suffering with tertiary syphilis with filtered extract of syphilitic liver, and also with extract of the testis of rabbit-syphilis, using as a control normal liver extract and normal testis extract. Within a few days there appeared at the site of

the injections of the syphilitic extracts an indurated, reddened tumor mass resembling gumma, whereas the control injection remained normal. In the second case, he injected a patient with filtered extract and killed pure cultures of the spirochætæ, using as a control normal extract and normal culture media. Here again, in a few days, changes resembling gummata developed at the site of the injections. He concludes from these experiments that killed spirochætæ and their toxins and also filtered syphilitic liver extract are capable of developing changes resembling those of the tertiary period in syphilis. The author also expresses the opinion that the gummatus changes may be explained by an anaphylaxis rather than by a diminished resistance to the spirochætæ or its toxins.

3. In the third set of experiments dealing with the formation of anaphylotoxins, the author conducted a set of experiments with guinea pigs using the sera of patients in the primary, secondary and tertiary periods, and watery extract of syphilitic liver as sensitizing and secondary doses. He concludes as follows: (1) Mixtures of syphilitic sera with extracts of syphilitic organs elicit anaphylaxis in guinea pigs after intravenous injections. The older the syphilis the more often is anaphylaxis noted. (2) By the addition of guinea pig complement to the mixture of syphilitic serum plus syphilitic liver extract, anaphylotoxins are developed more often in earlier syphilis. (3) Using pure cultures of the pallida as an antigen, it was found that anaphylotoxins could be provoked by mixture with guinea pig complement.

THE SIGNIFICANCE OF THE WASSERMANN REACTION CARRIED OUT WITH CADAVER BLOOD. HAROLD BOAS and HJALMAR EIKEN, p. 313.

The authors practiced the Wassermann reaction on 540 cadavers at autopsy. In but 373 of these was the blood available for the test. They used 0.2 cc. of serum obtained from such blood and found that so many cases gave a positive reaction in which previous syphilis could practically be excluded that this positive result can have no significance from a practical standpoint. Using, however, 0.1 cc. of serum, one-half the usual dose, the reaction is somewhat more specific. For of 326 control patients only 3 gave a positive reaction under these circumstances. On the other hand, a negative Wassermann reaction using cadaver blood has much less significance than a negative reaction in living patients. For in 29 cases of active untreated syphilis, 5 gave a negative Wassermann reaction.

CONCERNING LIPOID DEGENERATION OF THE ELASTIN OF THE SKIN. C. KREIBICH, p. 325.

The author examined histologically senile skin, to determine whether there was a lipoid degeneration in the elastin, as was shown in the examination of seborrhœic warts from elderly people, where the elastic fibres of the cutis have been shown to take specific color with fat-staining reagents. He found in frozen sections stained with fat stains, such as Sudan or scarlet red, that a degeneration of the elastic fibres occurs, which is characterized by the presence of small droplets of lipoid substance in the fibres. This degeneration of the elastin of the skin he holds is identical with the fatty degeneration of the elastic fibres in arteriosclerosis as described by Jores.

HARD CHANCRE OF THE PORTIO VAGINALIS UTERI AND ITS DIAGNOSIS. G. TH. ZOMAKION, p. 329.

The author states in this paper that from the standpoint of the gynecologist, chancres of the cervix uteri are extremely rare. According to most syphilogra-

phers, their rarity is due to their not being recognized or looked for. The paper includes the case reports of two patients in whom chancres in this location occurred. After a study of the symptomatology and diagnosis of such lesions, the author draws the following conclusions: (1) Hard chancre of the portio vaginalis uteri can usually be overlooked because it is not accompanied by any marked clinical symptoms. (2) The presence of infectious material in the vagina is significant for the contamination of others, and also for auto-infection. (3) The diagnosis of hard chancre of the portio vaginalis uteri is somewhat difficult, depending upon the anatomical structure of the os and from the clinical history. (4) The microscopical examination or biopsy can establish the diagnosis definitely and one should undertake biopsies oftener. (5) In both cases described by the author, there was an increase of a discharge of a purulent nature, and in addition the menses were increased as the result of the lesions.

CLINICAL, BACTERIOLOGICAL AND SEROLOGICAL STUDIES CONCERNING ULCUS MOLLE OF THE DUCREY STREPTOBACILLUS. TETSUTA ITO, p. 341.

Herein are described the results of clinical, bacteriological and serological experiments on the organism of soft chancre. The laboratory experiments are summed up in the following conclusions:

(1) The intracutaneous reaction with a vaccine made from Ducey's bacillus is specific and can be used as an aid to the diagnosis of the condition.

(2) Vaccine treatment of buboes with streptobacillus vaccine gives excellent and quick results.

(3) The intense manifestations of the bubo in soft chancre are caused perhaps not only by the direct action of the streptobacillus, but by simultaneous anaphylactic reaction on the part of the organism.

(4) The best culture medium for the growth of the streptobacillus is defibrinated blood. Blood bouillon mixture is better as a fluid medium than the undiluted blood.

(5) The culture medium described in this paper by the author himself is similar to and cheaper than others heretofore used. This culture medium serves equally well for gonococci.

(6) Streptobacillus grows well after fifty generations if fresh cultures are made daily.

(7) The toxine of streptobacilli is found in the bacillus itself (endotoxine).

(8) Streptobacillus emulsion injected into guinea pigs in the ratio of 1 cc. per 100 gms. is not fatal. With a dose of 2 cc., death occurs within a short time.

(9) By means of previous treatment with vaccine, there is no active immunity developed in the organism.

(10) In the same way no passive immunity is obtainable.

(11) By previous treatment with vaccine or in the course of streptobacillus infection, there may develop hypersusceptibility. The passive anaphylaxis may be elicited not only with the anaphylactized serum of guinea pigs, but also with the serum of patients having buboes.

(12) The precipitation, agglutination and complement binding experiments are devoid of positive results with the serum of previously infected animals, and also with the serum of patients.

MORPHEA-LIKE EPITHELIOMA. M. L. HEIDINGSFELD, p. 375.

The author discusses here the literature of morphea-like epithelioma as described first by Hartzell, and adds to the hitherto published cases a case of his own observation and study. The case is described in full, including a histolog-

ical study. He believes that this type of epithelioma belongs to the so-called pre-epitheliomatous changes in the skin.

Heidingsfeld does not believe that the skin is a particularly fruitful field for studying the early malignant changes in the epithelium. Unless a tumor of the skin is clinically malignant, no definite knowledge of its histogenesis is possible. The origin and development of malignant cutaneous tumors remains as in other forms of carcinoma, an entirely unsolved riddle.

CONCERNING COMBINED TREATMENT OF CARCINOMA OF THE SKIN WITH CARBONIC ACID SNOW AND X-RAY. JOH. FABRY, p. 389.

This article, as its title would indicate, is a description of the combined treatment of epitheliomata by freezing and X-ray, as it is carried out in the city hospital of Dortmund by the author. The patients are treated as follows: The lesions are first frozen for one minute with the snow and then allowed to thaw out, and again frozen at once, a second full minute. Then the patients are given an exposure of $\frac{1}{2}$ of an erythema dose either immediately after the first treatment or one or two days later. In two cases healing took place in from two to four weeks, depending upon the size of the carcinoma. The scar formation is smooth and ideal—in a few cases hardly noticeable. He believes this method not only to equal that of others hitherto described for the treatment of epithelioma, but to excel all other treatments. Following this is the history of twelve patients thus treated by him.

DERMATOLOGISCHE WOCHENSCHRIFT.

(July 19, 1913, lvii, No. 29.)

Abstracted by CHAS. GOOSMAN, M.D.

NODULAR PLAQUES IN SCLERODACTYLIA. B. LIPSCHÜTZ, p. 851.

Lipschütz reports a case of sclerodactylia following a few days after rheumatism-like pains in the shoulders and knees. The sclerodactylia spread from the fingers to the palm and back of the hand. After two months there developed flattened, indurated plaques in the affected skin. These plaques, while apparently deep in the corium, were not adherent to the fascia or periosteum, but moved with the skin. Biopsy showed marked hypertrophy of the collagen fibres. Some of the arterioles had marked endothelial proliferation, with irregular narrowing of the lumen, while others were found with marked cell proliferation in the adventitia. Some of the arteries, however, remained normal and in none was the media thickened, as described by some authors. Lipschütz sees an analogy between the circumscribed nodes of scleroderma and the indurations described in idiopathic atrophoderma.

(*Ibidem*, July 26, 1913, lvii, No. 30.)

TREATMENT WITH CONTRALUESIN. ED. RICHTER, p. 883.

After a discussion of chemotherapy, Richter takes up the subject of contraluesin. A close acquaintance with the remedy is not allowed, as its exact identity cannot be divulged until some future indefinite time. In fact, contraluesin has undergone various changes in the three years of its existence, and it

cannot yet be said with certainty that its full growth has been attained. But Richter admits that each ampule of contraluesin contains 0.14 gm. of mercury in colloidal form. The "colloidal" particles are seen with the microscope to vary in size from that of a coccus to a leucocyte. The contents of 4 ampules constitute one course of treatment. Two months later, this may be repeated. Besides mercury, contraluesin contains a trace of arsenic and phosphorus, used for their neurotropic effect.

Richter believes that a considerable part of the value of his remedy depends upon the carefully adjusted combination of the above-named and some, as yet, unnamed ingredients. The colloidal state of mercury is preferred because of its increase in surface area.

(*Ibidem*, Aug. 9, 1913, lvii, No. 32.)

HISTOLOGIC STUDIES ON SPONTANEOUS HEALING AND ALLERGIC REACTIONS IN TRICHOPHYTOSIS OF GUINEA PIGS. S. HANAWA, p. 939.

Experimental trichophytosis of guinea pigs, with *Trichophyton gypsum*, shows a typical course, having an incubation period of 5 to 6 days, and spontaneous healing in 16 to 18 days, with the production of an atrophic scar. Up to the sixteenth day, histologic study showed an abundance of parasites, but only mild inflammatory changes. Then occurred a rapid accumulation of leucocytes and necrobiotic changes, but the parasites were still well stained, and presumably alive. The healing, then, was not due to the death of the fungus, but to its being cast off by the violent inflammatory reaction, caused by a suddenly developed allergy.

If, after complete healing, a second inoculation is made, there occurs an immediate reaction, with purulent inflammation in 24 hours, and complete healing in 8 days.

Intracutaneous injection of a drop of trichophytin produces a similar allergic reaction, with severe inflammation.

(*Ibidem*, Aug. 16, 1913, lvii, No. 33.)

HISTOLOGIC STUDIES OF URTICARIA FACTITIA (DERMOGRAPHISM) AND URTICARIA CHRONICA, AND THEIR MAST CELLS. MENAHEM HODARA, p. 971.

Hodara discusses the various theories of the function and derivation of mast cells. He found the mast cells in urticaria to be derived chiefly from perithelial and connective tissue cells, and only in small part from lymphocytes.

Histologic study of an area of dermographism confirmed Unna's observations, showing œdema of the cutis, hyperplasia of the perithelial cells, proliferation of connective tissue cells, and the presence of numerous round and elongated mast cells in the vessel walls. Beside these well-known changes, Hodara found perivascular accumulation of lymphocytes and hypertrophy and œdema of the involuntary muscle. In normal appearing areas of the same case of dermographism similar changes were found, but with less œdema and more mast cells. In a case of chronic urticaria, a large wheal was studied. This showed enormous dilatation of the lymph and blood vessels, and marked œdema of the connective tissue and epidermis. Infiltration with lymphocytes and polynuclear leucocytes was extreme. Mast cells were not so abundant as in dermographism. Although this case of chronic urticaria had no dermographism, a normal appearing area of skin showed changes identical with the normal area in the first case.

(*Ibidem*, Aug. 23, 1913, lvii, No. 34.)

BACTERIOLOGIC STUDIES IN PEMPHIGUS. MARIO COPELLI, p. 995.

Radaeli has obtained cultures of a small bacillus from the blood, spleen and bone marrow in six cases of chronic pemphigus that came to post mortem. In all of these cases blood culture had been negative during life. Inoculation experiments in rabbits always caused death by septicæmia.

In December, 1912, Copelli obtained pure cultures of a similar bacillus in a case of acute pemphigus. Five cc. of blood were used for inoculating bouillon and other media, and positive results were obtained in all three attempts. The organism was particularly numerous in the last blood culture, taken a day previous to the development of a fatal arterial thrombosis.

The bacillus is described as $1\frac{1}{2}$ to $2\frac{1}{2}$ microns in length, motile, Gram negative, facultative anaerobe, producing rapid hæmolysis. Old cultures have a distinctive, unpleasant odor. Rabbit inoculations were followed by death in 3 to 4 days, without any skin lesions. Copelli succeeded, by inoculating from rabbit to rabbit, in diminishing the virulence to such an extent that death did not occur until one month. In these animals a generalized alopecia developed, as well as vesicular lesions. These are considered analogous to the eruption in man, but they ruptured very early, on account of the tender epithelium of the rabbit.

Two intravenous inoculations into monkeys were made. The first, a male macacus, developed fever, but recovered in a few days without any skin changes. The second, a female macacus, had high fever for 5 to 6 days, with loss of weight. After the tenth day there developed successive crops of superficial vesicles, the size of a lentil. Both serous and hæmorrhagic lesions appeared, bordered by normal skin. The distribution was irregular and scattered over the body.

Blood examinations in inoculated animals showed a chlorosis type of anæmia, diminution of lymphocytes, and increase of polynuclear leucocytes, myelocytes and myeloblasts. The blood forming organs showed increased activity, and in one rabbit there was distinct evidence of myeloid change in the spleen.

SPONTANEOUS DISAPPEARANCE OF FACIAL WARTS AFTER SURGICAL REMOVAL OF SOME FROM THE HAND. LOUIS MERIAN, p. 1001.

After curetting several warts on the hand of a boy, there followed spontaneous healing of those on the forearm and face. Merian inoculated a scarified spot on his own hand from the curetted material and in 10 weeks a solitary wart appeared.

Five cases are cited from the literature, in which disappearance of multiple warts followed the treatment of only a few, by Roentgen ray, radium or electrolysis.

(*Ibidem*, Aug. 30, 1913, lvii, No. 35.)

TRICHOPHYTOSIS IN ADULTS. S. L. BOGROW AND N. A. TSCIERNOGUBOW, p. 1028.

The authors call attention to the fact that trichophytic infection of the scalp is not so rare in adults as is commonly believed. Many cases are cited, of which a large proportion were in Japan. Two new cases are described, both receiving the infection from their children. Cultures showed *Trichophytum violaceum* in one and *Trichophytum crateriforme* in the other. Treatment was by Roentgen ray.

Attention is called to the fact that many infections in adults, particularly the deep seated ones, such as kerion, parasitic sycosis and trichophytic granuloma are

due to virulent, pyogenic fungi, chiefly of animal origin. Next to these in virulence comes *trichophyllum violaceum*, which is particularly abundant in Russia and Japan.

A NEW SYRINGE FOR INTRAVENOUS INJECTION. ARTHUR FONTANA, p. 1032.

For injecting concentrated neosalvarsan solutions, Fontana uses a glass syringe in which the piston is moved by rack and pinion.

EXPERIENCES WITH IODOCITIN. HERMAN MAYER, p. 1033.

Iodocitin is a lecithin and albumin compound of iodine. The iodine is not liberated in the stomach, and therefore does not cause iodism. Iodine can be detected in the urine within four hours, but not after forty-eight hours, therefore cumulative action does not occur. Lecithin is absorbed from the intestines without undergoing any change, and probably transports the iodine to the nerve centres, which have been shown by Peritz to be deficient in lecithin when affected by syphilis or the so-called metasyphilitic diseases.

Mayer has used iodocitin in more than 100 cases of syphilis, after treatment with salvarsan and mercury. In several cases of brain syphilis, iodocitin alone was used for one week preceding the salvarsan, with distinct improvement of the symptoms. The dose is one tablet three times a day.

DERMATOLOGISCHE ZEITSCHRIFT.

(March, 1913, xx, No. 3.)

Abstracted by PHILIP FRANK SHAFFNER, M.D.

CONTRIBUTION TO OUR KNOWLEDGE OF LICHEN NITIDUS. BACH-RACH, p. 189.

The patient, afflicted with pulmonary tuberculosis, presented on the sides of the trunk, the anterior parts of the left thigh and over the left hip joint, round and polygonal shaped papules of the size of the head of a needle, of a brownish red color, sharply demarcated from the normal skin, not confluent and with no tendency to grouping. The mucous membranes were not involved.

The symptomless course of the eruption, its appearance in but a single type of lesion, the independence of the lesions in their relations to the follicles, diagnoses lichen nitidus.

The histological examination corresponded to that of earlier observers of this disease.

Nevertheless, an ætiologic connection of this condition with tuberculosis can be ascertained neither through animal experiments nor by tuberculin injections.

CONCERNING THE REFINEMENT OF THE WASSERMANN REACTION AND THE AVOIDANCE OF DIVERGENT RESULTS. FRITZ LESSER, p. 193.

Lesser warns against the various methods of refining or intensifying the Wassermann reaction. All these methods tend to produce more positive results in that the degree of positiveness of all sera in so doing, is increased. Lesser claims that by such procedures, positive reactions are produced in non-luetic individuals.

The author considers as useful for intensifying the reaction in doubtful cases, but two controls, namely, the normal amboceptor and the active serum controls.

BOECK'S SARCOID IN EXTENSIVE GENERALIZED TUBERCULOSIS.
GUSTAV STRÜMPKE, p. 199.

The twenty-six year old patient presented, besides an extensive generalized tuberculosis (pulmonary, glandular, intestinal and osseous), a small, papular, infiltrated, generalized and diffuse eruption, which presented micro- and macroscopically, the picture of a Boeck's sarcoid.

Although tubercle bacilli were not found in the histological preparation and although the animal experiments were negative, yet because of a reaction to tuberculin both in the skin as well as in the generalized tuberculosis, Strümpke claims that a definite relationship exists between this affection and tuberculosis.

The exanthem failed to respond to the quartz or Roentgen rays or to arsenic, but regressed rapidly when the pulmonary process began to extend.

The author believes that the rapid progress of the pulmonary tuberculosis that finally led to exitus, was dependent on the tuberculin injections and he warns against the use of tuberculin in cases of generalized tuberculosis.

A RARE FORM OF SECONDARY LUES (SYPHILIS CUTANEA VERRU-COSA). M. DEMANAWITSCH, p. 212.

The author describes an interesting case of hyperkeratotic lues of the secondary type, presenting histologically the usual findings of syphilis, in addition to spirochætæ which were present in the preparation in numbers.

The exanthem subsided rapidly under salvarsan medication.

Lanz has given the name of syphilis cutanea verrucosa to this rare form of lues.

FROM THE LIFE OF JULIUS BETTINGER, THE ANONYMOUS PALATINATE. E. HOFFMANN, p. 220.

This article is of historical interest only.

DEUTSCHE MEDIZINISCHE WOCHENSCHRIFT.

(Oct. 2, 1913, xxxix, No. 40.)

Abstracted by CLARENCE ALLEN BAER, M.D.

EXPERIENCES WITH EMBARIN IN PRIVATE PRACTICE. RICHARD PLANNER, p. 1940.

Embarin is a trade name for a soluble mercury preparation. One cubic centimetre of embarin contains 0.03 metallic mercury, which is more than any other soluble mercury preparation contains.

The author used embarin in 34 cases, 26 men and 8 women, giving in all 365 injections; 5 men and 3 women (young girls) could not stand the embarin and gave very high fever reactions. A few of these cases showed an idiosyncrasy against the drug, in that the temperature rose very high immediately after the first injection. In most of these cases, however, the cumulative action of the mercury was demonstrated and the fever did not appear until after 9 or 10 injections had been given. When the embarin was injected in the morning, fever

occurred in the afternoon and had entirely disappeared by the next morning. These high temperatures were accompanied by drowsiness, headache and anorexia, but the symptoms all disappeared on the following day. Disorders of the intestinal tract were not observed.

One case of severe chill and fever and the appearance of a measly rash was noted after the fourth injection, given after a salvarsan injection. Among the 34 cases there were 2 that could not endure any other kind of treatment with any other preparation except embarin.

Injections were given as a rule every second day. When combined with salvarsan, 10 or 15 embarin injections were given before and after a single salvarsan, or if 3 salvarsan injections were given, then 5 embarin injections were given between the salvarsans.

In late luetic manifestations of the nervous system, salvarsan was given every fifth day with several embarin injections between them. In one case, 3 embarin injections were given on successive days, followed after a day's pause, by neosalvarsan, 0.4, and this combination was repeated several times.

In some cases embarin was combined with potassium iodide. This was used particularly in a case of syphilis with bladder symptoms. In 12 cases of paralysis and tabes, embarin was also used and well borne by the patients.

In some cases a very strongly positive Wassermann reaction remained negative four months after a series of treatments. In 7 or 8 cases in which the Wassermann reaction could not be made negative by embarin alone, neosalvarsan was added to the treatment and the reactions became negative or at least very faintly positive.

In conclusion, Planner says embarin is a very effective mercury preparation in that it destroys the spirochætæ by introducing into the blood at one time a large mercury content. Embarin is well borne and can be used by sensitive individuals but treatment must be begun by a small dose and gradually increased to a full dose.

PSORIASIS AS A CONSTITUTIONAL DISEASE. W. SCHOENFELD, p. 1944.

The author replies to remarks made by Menzer about his (Schoenfeld's) article on psoriasis that appeared in No. 30 of the *Deutsche medizinische Wochenschrift*.

(*Ibidem*, Oct. 9, 1913, xxxix, No. 41.)

MEDICAL COSMETICS OF THE SKIN. KROMAYER, p. 1969.

This is a third installment of articles by Kromayer on cosmetics of the skin and the treatment of certain skin diseases, such as acne vulgaris, milium and lichen planus.

(*Ibidem*, Oct. 16, 1913, xxxix, No. 42.)

CONCERNING LATENT ERYSIPELAS AND TOXIC-FOLLICULAR ECZEMA. F. BERGER, p. 2036.

The author reports a case of latent erysipelas in every way a parallel to the cases previously reported by Schlesinger and occurring on an old eczematous condition. A case of follicular eczema is also reported, because of the ætiological cause, namely, catarrhal jaundice. These cases are reported together because Berger wishes to emphasize the relationship between follicular eczema and toxic disease processes.

ALLAYING OF THE FEAR OF EMBOLI FROM PARAFFINE INJECTION. ALBERT E. STEIN, p. 2048.

This is an answer to an article on the same subject by Hartung. Stein claims to have recommended the method of Hartung twelve years ago.

ARBEITEN AUS DEM KAISERLICHEN
GESUNDHEITSAMTE.

(May, 1913, xliv, No. 3.)

Abstracted by CHARLES GOOSMAN, M.D.

CONTRIBUTIONS TO THE EXPERIMENTAL PATHOLOGY AND
THERAPY OF SYPHILIS, WITH SPECIAL REFERENCE TO
INOCULATION SYPHILIS OF RABBITS. P. UHLENHUTH AND P.
MULZER, p. 307.

No immunity has been demonstrated in rabbits at any stage of infection. Repeated injections of material containing dead spirochetes do not protect rabbits against subsequent infection. Anti-bodies could not be found in rabbit or human syphilitic serum.

Of considerable interest were the inoculation or rabbit tests with the blood of known human syphilitics. In primary syphilis, 84.2% were positive; in the secondary, 75%. Tertiary syphilis was negative, although only a small number have been tested. Some of the positive inoculations were from primary cases with negative Wassermann reactions. One case of latent syphilis, in an apparently healthy mother of a syphilitic child, gave a positive result.

The semen from one case of secondary lues produced syphilitic orchitis in rabbits. The milk from a latent case (the mother of a syphilitic child) was also positive, as was the milk from a case with early secondary eruption.

From the above experiments, the authors conclude that syphilis is a chronic septicæmia, although they never found spirochetes in the blood. It is possible that the blood contains unknown stages in the life history of the parasite.

Some experiments with syphilitic material (testicle extract) showed that the organism could not pass through a Berkefeld filter.

To anyone working on experimental syphilis, this work of Uhlenhuth and Mulzer will be of very great value.

ANNALES DE L'INSTITUT PASTEUR.

(July, 1913, xxvii, No. 7.)

Abstracted by R. C. JAMIESON, M.D.

TREPONEMATA IN THE BRAINS OF GENERAL PARALYTICS. C.
LEVADITI, A. MARIE AND J. BANKOWSKI, p. 576.

The extensive researches of the authors tend to throw valuable light upon conditions hitherto little understood in considering the relation of syphilis and brain conditions. They have examined a great number of brains and admit that the results are very inconstant.

Failure to discover the treponemata may be due to absence of syphilitic infection in the general paralytic, or may be due to imperfect technique, but they think that treponemata should be discovered in more cases of general paralysis than is being done at present. Faulty methods of making sections of the brain will frequently prevent discovery of the treponemata even though properly stained.

However, they examined systematically each cerebral convolution of general paralytic brains and succeeded in discovering treponemata in practically all cases. Nine *fresh* brains were examined, the majority having a positive Wassermann, eight (88%) being positive by ultramicroscopic examination, one (11%) being positive by the silver impregnation method. Their conclusions from these examinations are most interesting. Eight cases died of apoplexy, and they believe that treponemata exist in a constant state in the cerebral cortex of general paralytics who die of apoplexy, but that the treponemata vary in number and location, being generally in centres more or less circumscribed. Three of the eight cases showed the treponemata to be as abundant as in chancre. Treponemata were also found in the ventricles, but nowhere in the brain except the cortex. No treponemata were found in the brain of a case of general paralysis due to chronic mercury poisoning.

They believe that general paralysis is due to a multiplication of treponemata in the cerebral cortex and to lesions caused by this multiplication. This increase in growth of treponemata is similar to the appearance of mucous patches and syphilides, leaving scleroses.

Finally, apoplexy corresponds to a treponema outbreak, especially when localized in the motor areas and it is in these cases, where patients died in an apoplectic stroke, that there is more chance of finding the treponemata.

RUSSKI JOORNAL KOJNIKH E VENERICHESKIKH BOLEZNEI.

(June, 1913, xxv, No. 6.)

Abstracted by M. L. RAVITCH, M.D.

TINEA TONSURANS OF ADULTS. BOGROV AND CHERNOGUROV, p. 499.

While Stelwagon reported only one case of tinea tonsurans of an adult, while Duhring had never seen a case in many years, and while Crocker is of the opinion that no cases proved to be *microsporon tinea tonsurans* in an adult, Parounagian reported two cases of tinea tonsurans in adults and both cases were Russians.

The writers state that according to Lailier, Hardy, Colson, Barthelemy and Besnier, tinea tonsurans, after the age of fifteen, disappears. They believe that the scalp at that age is unfavorable for the growth of the fungus. They attribute this resistance to the chemical changes that have taken place in the secretory and sebaceous glands. The latter acquire bactericidal properties during that age. Since they had several cases of this affection in adults, the writers are unable to explain its presence. Referring to singular cases of Pellizzari, Thin, Aldersmith and Pernet, they themselves report two cases. Both occurred in women, aged 37 and 33, who had contracted this disease from their little girls. The authors have also noticed that in tinea unguium, the percentage is greater among adults than in children. They agree with Sabouraud, that trichophyton violaceum is the most common fungus found in Russia. In fifty cultures made, they found

nine cases of trichophyton acuminatum, seven of microsporon lanosum, six of trichophyton crateriforme and twenty-eight of trichophyton violaceum.

Trichophyton violaceum was found not only among children infected in Moscow, but also among the children who came from a great many other cities.

On the other hand, according to the authors, where tinea tonsurans is prevalent, tinea violaceum is seldom met with.

A RARE CASE OF HEREDITARY ANOMALY OF THE SCALP. FRENKEL, p. 516.

Troitzki cites Frenkel's case of cutis verticis gyrata, reported in the *Military Medical Journal* for February. The patient, a soldier, had a peculiar condition of the scalp. It was streaked with folds of skin, the bottom of the furrows being covered with black hair. The skin of the scalp was three times as thick as that of the body. The skin of the body had no folds and was perfectly normal. The patient's father had the same condition of the scalp, but not so extensively.

The author attributes this anomaly to over-development of the areolar subcutaneous layer. He calls this condition "cutis verticis gyrata."

THREE CASES OF SYNDACTYLISM. KARTASHEVSKI, p. 517.

Troitzki, quoting Kartashevski's three cases of syndactylism, reported in the *Military Medical Journal* for February, says that this should be looked upon as a retarded development rather than a pathological phenomenon. Very few cases are acquired, except those that are the result of a burn. One case was on the left hand, one on the left foot and the other on the right foot. Since the movement of the fingers and toes was not impeded, the author did not advise an operation.

BRITISH MEDICAL JOURNAL.

(Jan. 25, 1913, No. 2717.)

Abstracted by FRANK E. SIMPSON, M.D.

A REPORT OF THE WORK CARRIED OUT AT THE RADIUM INSTITUTE. A. E. HAYWARD PINCH, p. 149.

Pinch gives an interesting account of the work carried out at the radium institute in London. The style of applicators, the varieties of screens and the technique of use of radium are described and radium reaction is explained. The results of treatment in 578 cases are given. These are tabulated but are of such great variety that only a few can be mentioned. Of 101 rodent ulcers, 31 were apparently cured, 41 were improved, 12 were not improved and 6 abandoned treatment; 10 were still under treatment. Several carcinomas of the rectum, uterus, breast, stomach, etc., were improved and one carcinoma of the rectum apparently cured. Nævi, keloids, pruritus and lupus erythematosus have been successfully treated. Many illustrative cases are described in detail. The article as a whole is admirably conservative in tone.

(*Ibidem*, Feb. 8, 1913, No. 2719.)

RAYNAUD'S SYNDROME AND SYPHILIS. HENRY SEMON, p. 278.

Semon calls attention to the relation of syphilis to certain types of Raynaud's disease. He reports a case of typical Raynaud's disease in which the Wasser-

mann reaction was positive. Notwithstanding syphilis treatment, gangrene supervened. Several other parallel cases from the literature are cited. The author urges the Wassermann test in all cases of Raynaud's disease and a trial of salvarsan.

(*Ibidem*, Apr. 12, 1913, No. 2728.)

THE NASCENT IODINE TREATMENT IN LUPUS NASI. P. W. BEDFORD, p. 767.

Bedford describes the treatment of a case of nasal lupus and laryngeal tuberculosis by means of a spray, consisting of one pint of a 3% solution of 10 volumes peroxide of hydrogen, to which had been added one ounce of acetic acid. Under this spray, applied hourly, and the injection of tuberculin (B.E.) at the same time, recovery with splendid cosmetic result is reported.

(*Ibidem*, May 17, 1913, No. 2733.)

THE INTERNAL SECRETIONS IN RELATION TO DERMATOLOGY. MALCOLM MORRIS, p. 1037.

Morris states that the administration of thyroid extract in psoriasis, lupus vulgaris and acute eczema, originally proposed by Byrom Bramwell twenty years ago, has nearly been forgotten. Of late years a revival of this practice is seen. Some historical notes of our knowledge of the internal secretions are given. The use of thyroid extract in myxœdema and many other skin affections is noted. It is useful in psoriasis, some cases of pruritus and chronic eczema. Darier's disease, scleroderma and acanthosis nigricans also may be benefited by thyroid extract. Keloid, warts, acne, rhinophyma, skin tuberculosis, affections of the hair and nails, have been more or less amenable to thyroid. The connection of the pituitary body and the thymus and suprarenal glands with certain of these diseases is also commented upon. The results yielded by organo-therapy in general, warrant a more extensive use of this method of treatment in dermatology.

X-RAYS IN THE TREATMENT OF DISEASES OF THE PALM. HALDIN DAVIS, p. 2733.

Davis reports two cases of palmar eczema and one case of palmar psoriasis which yielded to X-rays.

(*Ibidem*, June 7, 1913, No. 2736.)

RADIUM IN THE TREATMENT OF MALIGNANT DISEASE. ROBERT KNOX, p. 1196.

Knox writes of the methods of application of radium instruments, the action of radium on tumor cells and the proper selection of cases of malignant disease. Among his conclusions are, that in all cases of early cancer the operative method is undoubtedly the best. Radium is a useful adjunct to surgery. In inoperable cases, radium may render the case operable and failing that, it is a useful palliative measure.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

(Aug. 2, 1913, lxi, No. 5.)

Abstracted by FRANK E. SIMPSON, M.D.

PRIMARY SARCOMA OF THE LOWER LIP. A. J. MARKLEY, p. 334.

Markley reports an interesting case of primary sarcoma of the lower lip, a very rare condition. Clinically it resembled an epithelioma. Microphotographs of the sections of the excised lesion are appended.

A CASE OF LYMPHANGIOMA CIRCUMSCRIPTUM. PAUL E. BECHET, p. 333.

Bechet reports an interesting case of lymphangioma circumscriptum, situated on the thigh of a girl aged thirteen. A photograph is appended.

MYCOSIS FUNGOIDES FOLLOWING PSORIASIS. HOWARD FOX, p. 330.

Fox reports an interesting case of mycosis fungoides. For twenty-five years the patient had suffered from psoriasis when the eruption changed its character and became a frank mycosis fungoides. Similar cases in the literature are referred to. A photograph and microphotograph are appended.

BULLETIN OF THE JOHNS HOPKINS HOSPITAL.

(October, 1913, xxiv, No. 272.)

Abstracted by R. C. JAMIESON, M.D.

SALVARSAN IN PERNICIOUS ANÆMIA. T. R. BOGGS, p. 322.

Boggs reviews some of the above cases in which salvarsan was used and concludes that "the results justify its further use in pernicious anæmia, with special attention paid to the question of syphilis in the patient, the influence of salvarsan when given alone, the effect of arsenic on refractory cases and permanency of results."

AMERICAN JOURNAL OF THE MEDICAL SCIENCES.

(October, 1913, cxlvi, No. 4.)

Abstracted by R. C. JAMIESON, M.D.

THE PRESENT SITUATION IN SYPHILIS. W. A. PUSEY, p. 497.

Pusey takes up in detail the value of all the recent discoveries in syphilis, namely, the discovery of the spirochæta pallida, the Wassermann reaction in diagnosis and relation to treatment, Noguchi's luetin test, prophylaxis and treatment.

On account of the difficulty of distinguishing the pallida from other varieties, he thinks two independent observers should pass on a case and even then the results cannot always be depended upon. He considers the Wassermann test generally reliable, allowing for incompetence in reading results and faulty tech-

nique. Although a positive finding is often returned in a negative case, syphilis is often unrecognized on account of a negative result, and the test is often relied upon too much in other conditions. The test is a fairly reliable index to treatment and even in spite of negative results, relapses may possibly occur in future. Noguchi's test he places in the same class with the Wassermann. He states that the prophylactic use of thirty-three per cent. calomel ointment is a most important measure in the control of syphilis.

He feels that salvarsan is still a treacherous drug and that careful consideration should be given to its contraindications as it has at times a dangerous neurotropic affinity. He believes, from Buschke's work, that the arsenic is not eliminated completely for months after injection and fears that this prolonged arsenical action may increase nerve disturbances later on. The dangers, however, are relatively infrequent and unimportant, compared with the cure of syphilis. The symptomatic action of salvarsan is magical and in early cases, frequently abortive, but in later cases its curative use may result in an increase of neurorecurrences.

(*Ibidem*, November, 1913, clxvi, No. 5.)

THE NOGUCHI LUTIN REACTION IN SYPHILIS. GEORGE B. FOSTER, Jr., p. 645.

Foster's results with the luetin test applied to soldiers and civil prisoners are in general the same as have been reported from other sources—77% positive in treated secondary cases; 80% positive in tertiary cases and 88% positive in old latent cases. Even in spite of treatment, the reaction was positive but in those cases giving a positive Wassermann the luetin reaction was only weakly positive or negative, and vice versa. In the use of control cases an interesting, strongly positive reaction was obtained in one patient, a soldier, who gave repeated negative Wassermann reactions and who gave no history of syphilis. It finally developed that the maternal grandmother had supposedly a case of tabes and Foster believes that a condition of anaphylaxis had been transmitted from the tabetic to her grandson. He states that fluctuations in the activity of the treponemata favor the development of anaphylaxis and believes that this test is of great value in prognosis, a negative Wassermann and a negative luetin reaction being necessary before a patient is pronounced cured.

THE TRANSMISSIBILITY OF THE LEPROA BACILLUS BY THE BED-BUG (*CIMEX LECTULARIUS*). A. J. SMITH, K. M. LYNCH AND DAMASO RIVAS, p. 671.

As a result of their experiments with bed-bugs and leproa bacilli, the authors state that the bugs can be induced to take up blood containing leproa bacilli, but these bacilli finally disappear from the alimentary tract and glands where they are found after ingestion. The bed-bugs may also acquire the bacilli from biting lepers and may transmit the bacilli the same way. If bed-bugs really do transmit the disease by biting, probably other biting insects may become infected during the process of biting and sucking, and thus transmit the disease to man.

JOURNAL OF EXPERIMENTAL MEDICINE.

(May, 1913, xvii, No. 5.)

Abstracted by R. C. JAMIESON, M.D.

EXPERIMENTS ON THE TRANSMISSION OF SCARLET FEVER TO THE LOWER MONKEYS. GEORGE DRAPER AND J. M. HANFORD, p. 517.

The authors review the work that has been done on this subject since 1904 and question the reported successful results.

They have carried out an elaborate series of inoculations, reported here in full, which would seemingly have transmitted the disease to the monkeys employed, if such transmission were possible.

They conclude from their work that the transmission of scarlet fever is not definitely established, that monkeys are probably insusceptible and their temperature curves and leucocyte counts are not to be relied upon in the diagnosis of disease. They believe monkeys to be highly resistant to infection with human microorganisms.

(*Ibidem*, August, 1913, xviii, No. 2.)

THE CEREBROSPINAL FLUID IN SYPHILIS. A. W. M. ELLIS AND H. F. SWIFT, p. 162.

Ellis and Swift give the results of their examinations of one hundred and thirteen cases of syphilis in all stages from secondary syphilis to general paresis. Their lumbar punctures are made under novocain locally, with the patient on the right side, their cell counts are considered normal or doubtful, if under nine cells per cubic millimetre, lymphocytosis occurring above this mark. Serum of all cases was examined for lymphocytosis, globulin reaction and Wassermann reaction.

Of twenty-two cases of untreated secondary syphilis, the Wassermann reaction was positive in the blood, negative in the cerebrospinal fluid; of sixteen cases of treated secondary and tertiary syphilis, the Wassermann blood reaction was negative in only five, while the cerebrospinal fluid gave uniformly negative reactions.

In secondary syphilitic meningitis, Wassermann blood tests varied according to previous treatment, but the Noguchi globulin reaction with cerebrospinal fluid was positive in all, while the Wassermann reaction with the same fluid was positive in all but one. These cases all had a marked lymphocytosis.

In cerebrospinal syphilis, ninety-four per cent. gave positive reactions with large amounts of fluid (.5cc).

The results in tabes gave valuable information. Of thirty cases, twenty-nine showed a lymphocytosis, four being border-line cases; twenty-six cases showed a positive globulin reaction, twenty-four cases having a positive Wassermann (spinal fluid); sixty-six per cent. were positive Wassermann with blood, eighty-six per cent. with spinal fluid. They emphasize the fact that secondary manifestations are comparatively slight in the majority of cases subsequently developing tabes.

All reactions were positive in cases of general paresis. They advocate a more general use of lumbar puncture in prognosis and treatment of all cases, before cure can be pronounced complete.

NEW YORK STATE JOURNAL OF MEDICINE.

(June, 1913, xiii, No. 6.)

Abstracted by CHARLES T. SHARPE, M.D.

THE SYMPTOMS AND DIAGNOSIS OF INVOLVEMENT OF THE HEART IN SYPHILIS. (BASED ON A STUDY OF 200 CASES). HARLOW BROOKS AND JOHN H. CARROLL, p. 328.

The substance of this paper will be found in the abstract of the symposium on syphilis, from the *Post Graduate* of recent date.

(*Ibidem*, September, 1913, xiii, No. 9.)

THE WASSERMANN REACTION IN HEREDITARY SYPHILIS, IN CONGENITAL DEFORMITIES AND IN VARIOUS OTHER CONDITIONS IN INFANTS. L. EMMETT HOLT, p. 466.

It was to answer the question as to the frequency of syphilis in the ordinary run of hospital infants as well as in some special conditions, particularly congenital deformities, that a series of observations has been carried on in the Babies' Hospital during the past year and a half.

The Noguchi modifications of the Wassermann test has been employed in all of our patients. This has the great advantage of requiring much less blood (only $\frac{1}{2}$ cc.) than the Wassermann test. All but 17 of the tests have been made at the Rockefeller Institute by one of Dr. Noguchi's assistants and under his supervision. Two hundred and twelve children were tested. Thirty-one cases of hereditary syphilis were tested and 30 gave a positive reaction. The single case not reacting was in an infant five months old, that had been treated regularly with inunctions of mercury for a period of three months before. Conclusions: Cases of hereditary syphilis almost invariably respond positively to the Wassermann test, even when previously treated by mercury, unless the treatment has been very thorough and protracted.

After the use of salvarsan, it has been our experience that it disappears much more regularly and earlier, but even then in most cases only after repeated injections.

Of 178 tests made in hospital cases showing no definite signs of syphilis, positive reactions were obtained in but 11, and 5 of these were shown upon subsequent findings to be pretty clearly syphilitic. Three of the remaining 6 were doubtfully so.

The great proportion of congenital deformities have no relation to syphilis, since not a single positive reaction was obtained in 56 consecutive cases.

Of 62 patients suffering from malnutrition or marasmus, only 5 gave a positive reaction and are included in the group above mentioned. Of the remaining 57, nearly one-third had very considerable enlargement of the liver or spleen, or both. Since the cases examined were selected from a much larger number as those most likely to be syphilitic, we cannot regard syphilis as a common cause of marasmus, certainly in the patients admitted to the Babies' Hospital. Since the error, when one exists, is almost invariably on the positive side, the technique of those who find a very large proportion of positive reactions among marasmus patients in institutions is open to suspicion.

CANADIAN PRACTITIONER AND REVIEW.

(October, 1913, xxxviii, No. 10.)

Abstracted by CHARLES T. SHARPE, M.D.

VENEREAL DISEASE AS A PUBLIC HEALTH PROBLEM. F. ARNOLD CLARKSON, p. 582.

A CASE OF MALARIA TREATED WITH NEOSALVARSAN. CHARLES SHEARD, p. 588.

UNITED STATES PUBLIC HEALTH SERVICE.

PUBLIC HEALTH BULLETIN.

(July, 1913, No. 61.)

Abstracted by CHARLES T. SHARPE, M.D.

STUDIES UPON LEPROSY. GLANDULAR TUBERCULOSIS AMONG
LEPERS AT THE MOLOKAI SETTLEMENT. GEO. W. MCCOY, p. 3.

The only report that the writer has found of a leper suffering from tuberculosis of the lymph glands, verified by biological methods, is that recorded by Lie.

During nine months, 10 persons sought medical aid for enlarged caseous lymphatic glands, all of which proved to be due to the tubercle bacillus. The total number of lepers at the settlement is 650. The number therefore presenting these lesions is considered extraordinarily large, especially in view of the fact that pulmonary tuberculosis is not a common disease at the settlement. None of these 10 patients showed any indication of tuberculosis of any other part of the body, with the exception of one, who probably had pulmonary involvement. The patients were all adults.

The diseased glands were located as follows: axillary 7, inguinal and femoral 3, cervical 1, supratrochlear 1.

So far as determined, the bacilli isolated agree with the human type of the tubercle bacillus.

THE DANGER OF ASSOCIATION WITH LEPERS AT THE MOLOKAI
SETTLEMENT. GEORGE W. MCCOY AND WILLIAM J. GOODHUE, p. 7.

The summary only, will be given.

Of 119 men, practically all Hawaiians or persons of mixed Hawaiian blood, living in the same house with lepers, 5 (4.20 per cent.) developed leprosy.

Of 106 women under the same conditions as above, 5 (4.71 per cent.) developed leprosy.

Of 12 women, all Caucasians, who lived in such contact with lepers as is necessary in administering to their bodily and spiritual needs, none developed the disease. Of 23 men, all Caucasians, who lived in such contact with lepers as is necessary in administering to their bodily and spiritual needs, 3 (13 per cent.) developed the disease.

So far as could be ascertained, the shortest period in which the disease developed after the person entered the settlement was 3 years (2 cases) and the longest 17 years.

In a report made in 1886, it is asserted that 17 of 178 kokuas (or clean persons who have lived on more or less intimate terms with lepers) became lepers in 1 year, and in another report, made in 1888, that 23 of 66 kokuas examined had become lepers.

Whatever may have been the facts in the early days of the settlement, it is certain that no such state of affairs exists at the present time. It is possible that the improved general sanitary conditions under which the settlement has been operated in recent years, may have lessened the risk of infection.

ABSENCE OF LUTIN REACTION IN LEPERS SHOWING A POSITIVE
WASSERMANN REACTION. MOSES T. CLEGG, p. 11.

Eleven cases of leprosy, all free from obvious signs of syphilis, but all giving the Wassermann reaction, were negative to Noguchi's luetin reaction.

THE PRESENCE OF ACID-FAST BACILLI IN SECRETIONS AND EXCRETIONS OF LEPERS. HARRY T. HOLLMANN, p. 15.

Of the 75 lepers studied, 58 were of the nodular type, 6 of the mixed type, and 11 of the anæsthetic type of the disease.

Throughout the work, new microscopic slides were used. The film preparations were made as thin as possible, air dried for 24 hours, fixed by heat, stained by the Ziehl-Nielsen method, and decolorized and counterstained with Gabbett's methylene blue solution.

Full details of the technique are given.

Conclusions: Acid-fast bacilli, morphologically and tinctorially like bacillus lepra, were found in various secretions and excretions as follows: Nasal mucus, in 59.65 per cent. of nodular cases; in 66 per cent. of mixed cases; in 45.45 per cent. of anæsthetic cases.

Saliva, in 21.73 per cent. of nodular cases. Sputum, in 3.22 per cent. of nodular cases. Urine, in 7.14 per cent. of nodular cases. Sweat, in 14.28 per cent. of nodular cases. Lachrymal secretion, in 5.26 per cent. of nodular cases.

Acid-fast bacilli were not demonstrated in the fæces of four lepers examined.

FECUNDITY OF HAWAIIAN LEPERS. GEORGE W. MCCOY, p. 23.

The birth rate among lepers is generally assumed to be much lower than that of the healthy population, living in the same country. The results of the study of this question is therefore interesting.

The birth rate of the Molokai settlement is probably about two-thirds as high as that of the non-leprous members of the same race outside, but the data for an entirely just comparison are lacking.

The birth rate among lepers appears to depend on the fertility of the male, which probably is materially reduced. The fertility of the female does not appear to be impaired.

POST-GRADUATE.

(August, 1913, xxviii, No. 8.)

Abstracted by CHARLES T. SHARPE, M.D.

SYMPOSIUM ON SYPHILIS. *Discussion.* DR. EINHORN, p. 727.

Syphilis of the stomach has been known for a long time, but it was rather thought that only ulcers of the stomach could be of syphilitic origin, while of syphilitic tumors, simulating cancerous growths of large size, very little was known. They are not very common but in most instances where there is a palpable tumor, we should consider the possibility of syphilis. In one case where a tumor was palpated, the Wassermann test proved negative, and the patient was operated upon. A tumor was found but it was considered to be an inoperable case of cancer and the wound was closed up. Under treatment with iodides, the tumor disappeared and three years later the patient was well. More cases of syphilitic intraabdominal tumors which appeared under proper treatment were instanced.

The subject of syphilis of the liver has not been touched upon. About ten years ago, the speaker reported a series of cases of tumor of the liver which almost any one would have diagnosed as cancer, but which melted away under antisyphilitic treatment. Gummatous tumors of the liver are much more common than gummatous tumors of the stomach, and probably ten times as frequent.

In syphilis of the heart, the dyspnoea is an early symptom. This symptom, when not in harmony with the lesions present, is something to arouse a suspicion of some syphilitic change.

Einhorn recommends that whenever one is in doubt of a diagnosis at any time we should think of some possible syphilitic lesion, and no matter whether the Wassermann test is positive or negative, we should try antisyphilitic treatment.

DR. POLLITZER, p. 729.

This observer thinks the luetin reaction has been something of a disappointment. A fair proportion of the reactions are indefinite in character, and in luetics, as well as in non-luetics, there are reactions which leave us in doubt. It is largely these border-line cases which detract from the practical value of the test.

The serious import of syphilitic changes in the nervous mechanism is referred to.

As to the frequency of syphilitic lesions of the aorta, we get some idea from a recent publication of the Leipzig General Hospital, in which, in a study of 256 cases of syphilis that came to autopsy, 210 of the cases (82 per cent.) showed aortitis, ranging from a mild mesoaortitis to a pronounced aneurysm.

As to syphilis of the central nervous system, the fact that from 25 to 40 per cent. of the inmates of our public institutions for the insane have paresis, may serve to convey some idea of the enormous frequency of syphilis of the brain. It is important to bear in mind that within a few weeks after the infection, the spirochætae spread throughout the lymphatics into the circulation and then throughout the entire system. It is a matter of only recent knowledge that in the very first months of the disease the spirochætae invade practically every tissue in the body. We have long known it for the skin and the mucosa; we know of it for the nervous system, where Captain Nichols has demonstrated the spirochætae in the spinal fluid in a case that had been infected only three months before. Once in the tissues, the organisms are probably destroyed in large numbers by the natural agencies for resisting infection, but large numbers remain and perhaps pass into a resting or spore stage, and do no further damage until something happens to provoke them to renewed activity—just as malaria may lie dormant for years, to become active again when the patient meets with some shock like a fracture, parturition, etc.

In the skin, we know how frequently the occurrence of a gumma is preceded by some local injury. In fact, the determination of tertiary lesions in the skin by trauma is well recognized by syphilographers, and this fact seems to the author to point to the presence of spirochætae, in an encysted or resting stage.

As to treatment—saturate the patient with salvarsan. Get it as soon as you can! Don't wait! Observations made many years ago show that it is the mild cases of syphilis—those without skin lesions—that give us most of our cases of late syphilis of the nervous system.

The ideal treatment of a recent infection with syphilis follows:

If the patient is seen within a few days of the appearance of the initial lesion, it should be excised and the patient given at once an intravenous injection of salvarsan. Four more injections of salvarsan are given within the next ten days or fortnight. This course is followed by a course of weekly intramuscular injections of an insoluble salt of mercury—Pollitzer employs the salicylate in doses of two, three, or even five grains, if the patient takes it well, for ten weeks. Then a pause for two months, a Wassermann test at the end of this period, followed again by salvarsan and mercury, whether the Wassermann be negative or positive. If the Wassermann is positive, the first course of salvarsan and mercury is repeated; if it is negative, he gives only two injections of salvarsan, two or three days apart, and a course of six to eight injections of mercury. Again a pause for two months, and again a Wassermann test, salvarsan and mercury. Then a

longer pause—three or four months—and again salvarsan and mercury. This brings us well into the second year, and if the patient has been throughout Wassermann negative—as he probably will have been—it is safe to suspend further treatment, under constant watching of the Wassermann reaction at intervals of three months, during the next two years.

ILLINOIS MEDICAL JOURNAL.

(August, 1913, xxiv, No. 2.)

Abstracted by CHARLES T. SHARPE, M.D.

CONCERNING THE WASSERMANN TEST. FREDERICK BAUMANN, p. 117.

The different substances entering into the Wassermann test do not bear any strikingly quantitative relationship to each other, because the complement is not a simple chemical substance whose action could be explained by a side-chain theory.

The complement is a ferment whose activity is governed principally by its own relative concentration, and to a lesser degree only by its quantitative relationship to the substance to be destroyed, to the substance which is the cause of its deviation.

Wassermann believed the complement to be a chemical substance, constituting a quantitative integral part of the reaction and formulated the technique of his test accordingly. It is, therefore, not surprising to find that this test is not based in a rational way on the laws governing the action of the ferment, the complement, and that a few changes will render it more sensitive, more accurate and perhaps somewhat more simple to perform.

As complement acts according to its concentration and rapidly loses its power to act, if diluted, all the parts entering the reaction should be used in their concentrated form. Thus the patient's serum should be used undiluted. The antigen, the complement and the amboceptor should be standardized and used in their concentrated form.

The washed blood corpuscles should be used in 25 to 50 per cent. suspension, instead of a 5 per cent. suspension.

The serum-antigen-complement mixture should be incubated for one hour, but after the addition of the sensitized blood corpuscles it should not be left in the incubators for any rigidly determined length of time. On the contrary, as soon as the negative controls have completely hæmolyzed, all the tests are removed from the incubator and at once diluted with physiologic salt solution. This will in all tubes at once stop any further action on the part of the complement. The time necessary to completely hæmolyze the negative controls should not be less than thirty and not much in excess of sixty minutes. The physiologic salt solution used for checking hæmolysis acts more promptly if it contains a little more than 0.85 per cent. of salt. The tests can now either be put in the ice-box for the rest of the twenty-four hours, or they can be centrifuged and read off at once.

This modified technique has been used for three years. It gives very constant comparative results, which cannot be equaled by tests made according to the original technique.

In spite of all the talk and all the writing about the syphilitic antibodies, it has not been proven as yet that the syphilitic affection does give rise to any such bodies. But just for the sake of argument, let us take it for granted that such a body is produced. How will we then explain the clinical course of the disease?

An effective antibody is incompatible, is unthinkable, with a disease lasting for generations. The syphilitic inflammations are from the beginning to the end of the infection of a chronic productive type. The more we perfect our technique of finding the spirochæta, the more evident it is that syphilitic lesions are always dependent on the immediate presence of the germ. The human system tolerates apparently a larger amount of syphilitic disease products than it does of any other disease. The complement must be considered in the light of a blood-ferment whose purpose it is to aid in the destruction of disease products. It can, therefore, easily be seen that the complement will be used up in much larger amounts in a serum taken from a case of active syphilis than in a serum taken from patients affected with diseases which produce more poisonous products, because the products of the latter diseases must of necessity be destroyed and excreted more promptly. They cannot be allowed to accumulate without immediate danger to the patient's life.

Conclusions.—The Wassermann test is not a specific reaction for syphilis, but it will naturally, for reasons mentioned above, on account of the mildness of the invader, show up stronger here than in any other disease. But every disease that causes the appearance of disease products in the blood of the patient will, for the time being, also give some degree of Wassermann reaction.

This test is, furthermore, mainly a group reaction, a non-specific group reaction, and it is in exceptional cases only that we will be permitted to exclude any of the factors aiding in the shaping of the final results of this reaction.

INDIANAPOLIS MEDICAL JOURNAL.

(Sept. 15, 1913, xvi, No. 9.)

Abstracted by CHARLES T. SHARPE, M.D.

SOME OBSERVATIONS ON TWO HUNDRED CASES OF SYPHILIS TREATED WITH SALVARSAN. GEORGE W. BOWMAN, p. 369.

In this paper the rate of absorption and elimination are discussed, a case of reinfection reported and statistics given regarding reproduction in syphilitics. Under the heading "Reactions" it is stated that in a small percentage of patients the tolerance for mercury and the iodides was markedly decreased after salvarsan, both in point of dosage, and over the length of period taken. Œdema of the lower extremities was noted in three females. In two, it cleared up permanently after injection of salvarsan.

A CASE OF DIFFUSE SYMMETRICAL SCLERODERMA IN A MAN OF TWENTY-SEVEN YEARS. FRANK M. FITCH and A. W. BRAYTON, p. 379.

The case developed first a thickening and stiffness at the back of the neck, then a hard mass the size of a dollar on each cheek beneath the eyes, extending later over the face and uniting with the area on the neck, thence to the shoulder blades posteriorly and to the nipples anteriorly and lastly down the arms, involving the elbows. Whistling is impossible and articulation difficult, owing to infiltration and œdema of the lips and buccal surface of the mouth. The hardening is slowly progressive.

The authors state that cases of this nature tend to spontaneous recovery within a year and are more favorable than the atrophic forms, and that there-

fore the administrations of specifics such as potassium iodide, arsenic and mercury are not indicated.

Grave's disease, myoderma and scleroderma are closely allied and may arise from thyroid lesions. Raynaud's phenomena may precede the marked symptoms, notably congestion of the hands and legs. Pathologically it is a vasomotor dystrophy.

After nearly two years of the disease the patient is somewhat improved, but far from well.

LANCET-CLINIC.

(March 22, 1913, clx, No. 12.)

Abstracted by CHARLES T. SHARPE, M.D.

SYPHILIS AND NEOSALVARSAN. M. L. HEIDINGSFELD, p. 306.

Neosalvarsan, which is virtually salvarsan chemically modified so as to permit its ready solubility in water in neutral and unchanged state, has, through its greater tolerance, ease and simplicity of administration, completely and satisfactorily superseded and eclipsed its illustrious predecessor. Neosalvarsan possesses all the therapeutic efficacy of salvarsan.

The salvarsan problem to-day may be stated as follows:

1. What are its untoward effects and how can they be successfully obviated?
2. To what degree its curative properties can and should be carried.
3. To what extent its action must be supplemented by other agents, and
4. What plan of treatment subserves its purposes the best?

The salvarsan results can be conveniently grouped into two large classes. Cases of syphilis in which clinical symptoms have remained permanently in abeyance for at least a year or more, with persistently negative Wassermanns, and those which have shown relapses of a clinical or laboratory type. The conversion of the latter to the former is the present question of chief absorbing interest.

Method of Administration.—Intravenous administration is the most efficient and best tolerated form of neosalvarsan treatment. The only exceptions are in infants and children whose veins are too small and too indistinct to permit of intravenous administration without an extensive dissection. In these, deep muscular injections of a concentrated aqueous solution or an oily suspension of neosalvarsan can be readily substituted.

The intravenous administration can be performed without any untoward incidents or danger in ambulatory practice, if proper technical precautions are taken. Every step of the operation should be attended with the most painstaking surgical asepsis. Only freshly distilled water should be used. The most common source of error in technique has been the use of bacteriologically infected or chemically impure waters. Severe, grave and distressing complications indicate a poor technique. Malaise, headache, nausea, vomiting, chill and febrile disturbance attending the administration is an expression of faulty technique rather than the measure of drug toxicity or its direct effect upon the disease.

Some have stated that the "amount" of syphilis present is to be considered—much syphilis, much reaction; no reaction, no syphilis—the degree of reaction being the keynote to diagnosis and treatment, and of more practical value than a Wassermann test. The writer feels assured that, under proper conditions, intravenous administration of neosalvarsan will produce little or no disturbance in even highly active and severe infections, and under proper technique much reaction may occur where there is little or no syphilitic infection.

Method of Treatment.—Partly from observations personally gleaned abroad and partly at the personal solicitation of Prof. Ehrlich, the writer pushed the treatment beyond the ordinary clinical and Wassermann requirements, in order to

do too much rather than too little and to play the game on the safe side. His results conformed to the impressions obtained from previous experience, namely, that clinical and laboratory relapses were not thereby more favorably circumvented, and that persistently positive Wassermanns could not be materially changed by such a procedure. If one or two salvarsan administrations failed to effect the desired result, a dozen closely repeated ones would not change the situation, even if they were otherwise well tolerated. The writer found it necessary to resort to adjuvants of a different character. Cases of laboratory or clinical relapse, which were once favorably influenced by salvarsan treatment, were usually promptly benefited when treatment was repeated. But aside from this particular class, oft and frequently repeated salvarsan possessed in and of itself little significance. Salvarsan, however, repeated after months of intermission, has often effected the desired result.

Serological Analysis.—Two thousand seven hundred and thirty-five Wassermann tests were made in 591 cases, and salvarsan was administered 801 times; all were ambulatory private cases and the treatment was administered at the office. Not a single administration was attended by any incident of untoward character. The initial dosage was almost uniformly 0.6 of salvarsan, and 0.9 or 0.6 of neosalvarsan; if neosalvarsan was repeated within thirty to sixty days, 0.3 was usually administered, unless persistent lesions or unchanged and strongly positive Wassermann reactions indicated otherwise. A Wassermann test was made prior to the initial administration and was repeated every thirty days, until the blood became negative. When the fixation test remained negative two successive times, the examination was repeated in sixty days; if then negative, in ninety days, and then at intervals of six, nine and twelve months, according to the special indications of the case. In only 198 cases of the 591 treated was there a record of but one Wassermann test; deducting these cases from the total, we have 393 cases, of which 295 proceeded to recovery from a combined clinical and laboratory standpoint, as a result of one or more salvarsan administrations, i.e., 75 per cent.

Of the 98 cases, or 25 per cent. of salvarsan failures, 20 proceeded to clinical and laboratory recovery with mercury, and 24 with cacodylate of sodium, atoxyl, and other measures. Eventually, all but 54 cases, or 13 per cent., have proceeded, at least for the time being, to complete clinical and laboratory recovery.

Two hundred and forty cases, for the most part old and long-standing infections, have received some form of previous mercurial treatment. Of these, 176 cases proceeded to recovery and 60 could not be intelligently followed. In other words, 75 per cent. proceeded to absolute recovery by the above standard, whereas 76 per cent. of those that received no previous mercurial treatment recovered by the same standard.

Persistent cases of syphilis which remained clinically or laboratory positive, as shown by repeated Wassermann examinations—salvarsan rebellious cases—were treated with massive intravenous injections of sublimite, sublimine, hyrgolum, and oxycyanide of mercury. Twenty-three cases improved and the remainder showed no change.

Oxycyanide of mercury was the best tolerated of all the preparations, but some intolerance on the part of the patients and the unsatisfactory character of the general results have discouraged the writer, at least for the time being, in pushing his investigations in this special direction.

(*Ibidem*, Aug. 2, 1913, ex, No. 5.)

REPORT OF A CASE OF SPOROTRICHOSIS OF TUBERCULOID TYPE. A. RAVOGLI, p. 112.

Ravogli reports a case in a young woman employed in a bakery. The differentiation from blastomycosis, syphilis and tuberculosis verrucosa cutis is discussed.

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For treatment, potassium iodide alone is not satisfactory but combined with local applications of pure lysol, it gives good results.

(*Ibidem*, Aug. 23, 1913, ex, No. 8.)

URTICARIA. J. W. MILLER, p. 195.

Miller reviews the subject, putting particular emphasis on nitrogenous foods as a causative factor.

ST. PAUL MEDICAL JOURNAL.

(May, 1913, xv, No. 5.)

Abstracted by CHARLES GOOSMAN, M.D.

SYPHILIS OF THE LIVER. T. W. STUMM, p. 199.

Stumm calls attention to the frequency of syphilitic involvement of the liver, and the difficulties in diagnosis. There may be all the symptoms of gall stones or cholecystitis, with colic, jaundice, fever and loss of weight. At operation one may find gummata, perhaps with some cirrhosis.

The Wassermann reaction and the therapeutic test are necessary aids in diagnosis.

SPINAL SYPHILIS: A CASE, SOME FACTS. C. EUGENE RIGGS, p. 224.

Riggs reports a case of acute syphilitic myelitis, with complete paralysis of the lower extremities, developing 4 months after infection. Paralysis was complete in a few hours. Repeated injections of salvarsan have been given without benefit.

UNIVERSITY OF TORONTO MEDICAL BULLETIN.

(April, 1913, I, No. 3.)

Abstracted by CHARLES GOOSMAN, M.D.

RESULT OF TREATMENT OF SYPHILIS AS SHOWN BY THE WASSERMANN REACTION. GORDON BATES AND GEORGE S. STRATHY, p. 6.

A negative reaction obtained within a few months of treatment by mercury is of little value, for it may later change to a positive. It is probably quite different in cases treated by salvarsan, for the authors have found a provocative dose of the latter, as advised by McDonagh, would sometimes change a negative into a positive reaction.

In 72 cases treated by salvarsan and neosalvarsan, the results varied mostly accordingly to the length of time elapsed between infection and treatment. The more recent the infection, the more quickly the reaction disappeared. Of 13 patients treated within 6 months of infection, 5 were negative after one dose, although one relapsed and became positive later. Of the remaining 8, 3 became negative after the second dose, 1 after the third dose, and 1 remained positive after 3 injections. The 3 other cases were not kept under observation.

Of 22 cases receiving salvarsan 3 years or more after infection, 6 cases remained positive after 6 injections. Of 14 cases of congenital syphilis over 4 years old, only 1 has become negative after repeated injections. Of 3 cases under 2 years, 1 became negative after 1 dose of salvarsan followed by mercury. Another required 3 doses of salvarsan, while the third is still positive after 2 doses. The following conclusions are reached:

Mercurial treatment of less than 2 years' duration seldom produces a negative Wassermann.

Salvarsan treatment is more effectual, but infections older than 6 months require repeated injections.

Potassium iodide does not cure syphilis, and is never sufficient treatment for a lesion, whether secondary or tertiary. Except in one case, the authors have never found that its administration, even in large doses, was followed by a change from a positive to a negative reaction.

NEW ORLEANS MEDICAL AND SURGICAL JOURNAL.

(June, 1913, lxx, No. 12.)

Abstracted by CHARLES T. SHARPE, M.D.

SOME VIEWS ON ERYTHEMA MULTIFORME. ISADORE DYER, p. 867.

Usually accepted erythema multiforme includes primary lesions, all having the common characteristics of bilateral symmetry, sudden appearance and like resolution, with a tendency to recurrence. These eruptions usually are purely inflammatory and in all but the vesicular and bullous types the evidences fade on pressure, indicating the ephemeral character of the eruption, and that in such types the evidences are not organized.

When the newer classification comes, there should be some revision of the scope of the erythemas, which at present spread over three groups, the hyperæmias, the neuroses and the inflammations, and of these, erythema multiforme at present occupies a limited consideration entirely out of proportion to its importance.

We are every day meeting fresh evidences of the correlation of skin diseases with other organs, and the evidences locally may be the signals of profound general disturbances. To any one who has watched the direct association of toxins and the skin evidences of their effects, the broad range of eruption expressions is noteworthy. While urticarial expressions are the rule, all the phases of cutaneous manifestations may appear, from simple hyperæmias to necrosis.

The elusive diagnosis of anaphylaxis is unsatisfactory. We should consider the various types in their relation to the division of eruptions, captioned as erythema multiforme.

Every now and then the expression of a disturbed digestive apparatus is displayed by gastric disorder, a general nervous upset, and a variety of eruptions on the skin, at one time flashing out a flushed face, or swollen and reddened extremities; at another time the circulatory disturbances are more deeply impressed and wheals or other urticarial manifestations obtain.

Where particular articles of diet are at fault, for example a bad shell fish, and canned goods, the effect may be more prolonged and the symptoms of intoxication more varied. If we carry the idea far enough, we begin to border

on the consideration of the organized disorders believed to result from articles of diet established among certain races, or in certain occupations, among which beri beri and sprue are to be classed, and perhaps pellagra.

Scurvy, due to prolonged use of salt meat and the deprivation of fresh fruits and vegetables, carries in its train the cutaneous disturbances manifest in some types of hæmorrhagic eruptions.

If the simpler forms of skin derangement under intestinal disturbances are erythema multiforme, why should not the more complicated manifestations be likewise classified? The limitations are already purely arbitrary and the borderland at which the present erythema group stops and these other disorders begin, is impossible to fix with any definition. With a broader survey of the field, we can surely study many conditions with less prejudice and with more assurance of finding a factor of causation. Let us take some of these conditions and try to analyze and work them out.

The eruptions occurring among those susceptible to the peculiar toxins of fresh pork and veal are included under the erythema group. The eruptions following the idiosyncrasy to quinine sometimes will assume all the characters of a hæmorrhagic type of erythema.

The eruptions of accidental type following the use of the sera, as diphtheria antitoxine, antistreptococcic serum, vaccinia inoculations, the eruptions accompanying influenza, and even some of the enteric fevers (typhoid and typhus) at times bear so much resemblance to recognized groups of erythema multiforme as to find place in this group, if the associated cause were not established. Why should they be separated?

The types of an eruption diagnosed as a dermatitis, or even organized eruptions such as acne or eczema, subjected to vaccine treatment, may be so changed under such medication as to have no resemblance to the original eruption, sometimes developing into dangerous, rarely even fatal, forms of generalized eruptions having the cardinal qualities of erythema multiforme.

Even rheumatism may associate such cutaneous disturbances, on the one hand assuming variant forms of erythema, as erythema nodosum, or as peliosis rheumatica, usually classified in the division of the hæmorrhages of the skin.

If a beginning intestinal disturbance may correlate the kidneys in the morbid picture so as to result in anæmias, and changes in the structural tissues of the skin may even involve that wonderful auxiliary functioning group of the ductless glands, is it an extraordinary hypothesis to conclude that the skin may at all times act as a signal board for the irregular disorders travelling among the ranges of the sympathetic system?

We have not yet solved the problem of pemphigus, of psoriasis, of herpes, of pityriasis rosea, none of which even look alike, but all of which have in common a vague suggestion of an undercurrent of nervous pathologic origin.

Herpetiform dermatitis bears the imprint of a varied ætiology. In some of the variations of this disease, especially the bullous and vesicular forms, we hesitate in the desire to bring these into the group of erythema multiforme, although we are so well satisfied in the objective essentials of the disease as well as in the subjective symptoms.

While we are struggling to explain the problem of pellagra, the whole picture of this disease makes it a highly organized form of the group we are discussing. The theories of an insect origin, of a maize toxine, of a central degeneration, progressive in character, all are not antagonistic to placing the disease among the divisions of erythema multiforme. As a matter of fact, a diagrammatic case of pellagra has all the characteristics of erythema multiforme. Beginning usually with a disturbance of the larger bowel, indicating an inflammatory disorder of the mucous lining of the whole intestinal tract, extending to the membranes of all the mucous coats of the body, pellagra gradually proceeds to involve the mucous layer of the skin, and finally the other membranes of the

body, including the walls of the blood vessels and the meningeal membranes of the brain and spinal cord. The progressive symptoms are manifest in evidences in each organ in turn. Those in the skin show no difference, often, from any toxic erythema in the beginning. Even with the advancing involvement of the skin, all the way to actual hypertrophy and necrosis, the erythema persists in all stages and in all types as a marked feature of the disease.

In the concomitant changes in the reflexes and in the nervous system, pellagra has much in common with the more serious cases of erythema multiforme of toxic origin, and it is hard to tell the difference between pellagra and herpetiform dermatitis when the patient is in the lethargic stages of these diseases.

The author pleads, then, for a revision of the erythema multiforme group, broadening its definition so as to include the wide reaches of erythema travelling into the fields of neurology and the other associated organs, arguing observation and experience and begging the concurrence of those clinicians who see in the eruptions of the skin more than a superficial expression of disease, so that sunburn and pellagra may be associated as extremes of the group, which in its middle ranges sounds the alarm of a disturbed economy, embracing all the active and complementary organs of the body.

SOUTHERN MEDICAL JOURNAL.

(July, 1913, vi, No. 7.)

Abstracted by CHARLES T. SHARPE, M.D.

PELLAGRA IN THE CANAL ZONE: ITS ÆTIOLOGY AND TREATMENT. W. E. DEEKS, p. 438.

A case report of thirty pellagrins, with a summary of the clinical manifestations.

(*Ibidem*, August, 1913, vi, No. 8.)

IMPROVED TECHNIQUE AND EQUIPMENT FOR THE WASSERMANN TEST, WITH COMMENTS. WILLIAM KRAUSS, p. 493.

This original article would need to be reprinted rather than abstracted to do it justice. A special incubator has been devised for the tests and a chart adopted for recording the modification of the complement.

A simple mnemonic for percentage of positives to be expected in primary syphilis is given as follows: Put down the number of weeks after the appearance of the chancre, thus 1, 2, 3, 4, 5. In the fifth week you can expect four-fifths positive. In the fourth week you can expect three-fourths positive. In the third week two-thirds, in the second week one-half, and in the first week one-fourth.

In the fifth, fourth, third, and second, the divisor is the same figure as the corresponding week, the multiplier, the number of the week preceding. In the first week the expected positives is half that of the second.

For detecting spirochætæ, the sore must be untreated for several days. The reason spirochætæ are so rarely found in primary sores is because the patients have been under active treatment up to the moment of examination. If they had been dressed with simple salt solution for two or three days, there would be considerably more positive findings.

(*Ibidem*, September, 1913, vi, No. 9.)

DERMATITIS VENENATA FOLLOWING THE USE OF HAIR STAIN.
J. L. KIRBY-SMITH, p. 574.

A report of two cases attributable to "Mrs. Potter's Walnut Juice Hair Stain."

TREATMENT OF CUTANEOUS EPITHELIOMATA. JOHN H. EDMONDSON, p. 578.

The first consideration in attacking this type of carcinomata is to note its pathological aspect, whether tubular or lobular. In the former, the strings of epithelial cells extend superficially along the lymphatic spaces of the corium, and rarely until late in development have a tendency to go deeper (as in the rodent ulcers); therefore the method of treatment should consist of a technique involving the superficial structure; while in the lobular types, when the tendency of the growth is downward and into the connective tissues, of course a more penetrating technique is indicated.

Present-day methods of treatment are excision, curettement, caustics and caustic pastes, actual cautery, fulguration, carbon dioxide snow, radium and Roentgen ray. The most valuable treatment is unquestionably radium or the X-ray. The advantage of the former lies in its ability to enter cavities that are inaccessible to the X-rays. The action is about the same with both remedies.

The vital force of living cells is influenced by the ray, but the cell itself is not influenced as by mechanical, chemical or physical agents. First there is an increase of vital force, then a cessation. The more vital the principle in a cell, the greater the effect upon the ray. The vital principle in embryonic cells being greater, as in the ova, spermatozoa and cells of malignant growth, it is more easily affected than the surrounding cells.

The author does not believe that X-rays have a "selective action" on cells of malignant growth, but attributes the distinction to lack of resistance to the rays at and beyond the violet end of the spectrum. This is proven by their action on cells of non-malignant growth but of a low grade resistance.

Adami, Paines, Farmer, Moore, Walker and Greenough show the similar microchemical staining reaction of mucin, hyaline, myeloid, keratin and other matter, products of cell degeneration, to the so-called intracellular cancer bodies. These authorities all agree that their nature is paraplasmic and non-parasitic. They have all noted the similarity between these cancer bodies and the products of nucleolar discharges in the cytoplasm. This suggests the causation of malignancy to be of an intracellular biochemical action.

Although the degree of malignancy diminishes as we leave the periphery of actual manifested involvement, the cause of recurrence, when the growth is destroyed, is due to a lurking degeneration not touched by the removal of the original growth.

Therefore it is absolutely necessary to give a series of X-ray exposures to regions where malignant growths have been removed by any and all methods. Owing to the work of Holz knecht, Benoist, Pusey, Sabouraud, Pfahler and numerous others, accuracy in dosage is now possible and we can determine the quantity and quality of the ray used and unless these measurements are practiced, the best results cannot be expected.

What dose and what penetration should be given? MacKee, of New York, advocates for all malignancies massive doses (4 or 5 H units) in two or three treatments. He claims that the cells will "educate themselves" against the action of the rays if milder treatment over a longer period of time is given; he uses a No. 6 penetrating tube, and keeps the vacuum constantly at the same

point. The author agrees as to holding the tube at the same point of vacuosity at each seance, but disagrees as to specified dosage in all cases.

Where atrophy is the result of treatment, and a recurrence appears, there is less chance to cure, due to nature's lack of assistance in tissue resistance, and he has noticed in numerous cases atrophy following massive dosage. Each case is a law unto itself and no set rule can be had for the amount of exposure. The penetration of the tube should be regulated according to the nature of the growth. After all signs of malignancy have disappeared a few séances over the entire region are given to destroy any possibility of lurking malignancy.

SAMBON, THE MAN, AND HIS LATER INVESTIGATIONS OF PELLAGRA. J. H. TAYLOR, p. 599.

An appreciation of Sambon, the man and scientific investigator, with a personal letter giving the results of observations in several pellagra districts of Roumania, Austria, Hungary, Italy, Spain and France. These observations further substantiate the results of the first expeditions to Italy, in which he obtained many striking facts that seemed to show a relationship between pellagra and certain biting insects.

BOSTON MEDICAL AND SURGICAL JOURNAL.

(July 24, 1913, clxix, No. 4.)

Abstracted by CHARLES T. SHARPE, M.D.

THE WASSERMANN REACTION IN ITS APPLICATION TO MEDICINE. W. P. LUCAS, p. 116.

The results obtainable by the use of the Wassermann test in the various stages of syphilis and as evidenced in tabes dorsalis, general paralysis, cerebro-spinal lues, in the cardio-vascular system, surgery, laryngology, ophthalmology, gynecology and obstetrics and pediatrics, with the percentage of positive findings that may be expected, are to be found in this article. Its use by insurance companies is advocated as well as in forensic medicine.

JOURNAL OF THE INDIANA STATE MEDICAL ASSOCIATION.

(June 15, 1913, vi, No. 6.)

Abstracted by CHARLES T. SHARPE, M.D.

SPOROTRICHOSIS; REPORT OF A CASE. B. W. RHAMY and W. W. CAREY, p. 274.

At the present time only about 200 cases of fungus infection have been reported from all over the world, of which about 30 were mould infections, but the authors believe that as our knowledge of this variety of infection develops, fungus infection will become more common than is at present believed.

A. S., male, aged 27, single, American, of Irish-American descent. In March

or April of 1904, while working in the railroad shops, he developed a "pimple" on the right leg, inner surface, lower third, which seemed to be deep down under the skin at first, gradually coming to the surface, increasing in size and becoming very painful until pus formed, after which pain ceased. The abscess was incised. Others followed, occurring both on the outer and inner sides of the leg. Some five or six months later, they started in on the left leg, starting approximately at the same place and advancing the same way as before. No new abscesses formed on the right leg after these were developed on the left, but there were discharging foci on both legs at the same time; the duration of this attack was over one year. He had several similar attacks, recurring at intervals of about six months.

In 1906 he contracted a gonococcus infection, which ran the usual course with severe manifestations later. On account of this, together with a desire to get rid of the old complaint, he consulted Carey in September, 1912. The patient was quite weak and had lost considerable weight. At this time he also had one or two lesions high up on the back and one under the arm, which were discharging pus. Several incisions were made and pus drained.

Laboratory examinations made by Rhamy were as follows: Urinary examination was negative. The blood examination showed 11000 leukocytes with 95 per cent. hæmoglobin. The differential count showed:

Polynuclear cells	65.5 per cent.
Large mononuclears	6.1 "
Small mononuclears	20.9 "
Transitional cells	1.0 "
Eosinophiles	6.1 "
Mast cells	0.4 "

The important feature of this blood examination is the eosinophilia. The Wassermann and the tuberculin tests were negative.

A very thorough bacteriologic examination revealed no organism other than a few staphylococci albi and numerous small yeast-like spores.

Cultures were made on 4 per cent. glucose bouillon and other media, on some of which developed, in about fourteen days, an exceedingly slow-growing facultative aerobic mycelium, which was at first creamy in color, later developing black pigment. This fungus, microscopically, showed branching threads, with many spores. The diagnosis was sporotrichosis.

This diagnosis was confirmed by Harold N. Cole, of Cleveland, who, using Sabouraud's glucose agar, succeeded in growing the fungus in four days.

At the time of writing, the patient was suffering from a prodrome of the formation of another abscess in the left groin, and which may go on and break down or disappear later on. No fever or increased pulse rate occurs, but increasing pain until one or the other happens. During the severe attacks, the appetite is poor. Treatment appears to be of no avail.

These infections pursue a chronic course and manifest themselves as ulcerations and subcutaneous abscesses or tubercles. Any part of the body may be affected, the organisms having been found in muscles, bones, kidneys, lungs, etc. The skin infections often follow trauma, although in some instances no predisposing condition is known by the patient.

In the systemic lesions, the primary infection has usually been found in the lung, from which other organs, including the skin, may be invaded. Lung infections of this character, in the form of bronchitis, have been noted. Breed reporting sixteen cases of yeast infection of the lung, and Hoxie and Lamar (*Jour. A. M. A.*, Jan. 13, 1912) report two cases of tracheo-bronchitis due to mould fungus.

Rhamy has seen two other cases.

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Attention was first called to fungi as systemic pathologic infectious agents in 1894 by Gilchrist, who described a skin disease later known as blastomycosis or oidiomycosis. Since then, cases have been reported by Hecktoen, Hyde, Montgomery and others.

It is now recognized that they may exist as a localized skin infection like ringworm, or as chronic systemic infections similar to the granulomas, and known as blastomycoses, oidiomycoses, saccharomycoses and sporotrichoses, according to the variety of fungus.

Photographs of patient and cultures are shown.

(*Ibidem*, July 15, 1913, vi, No. 7.)

A CASE OF PEMPHIGUS VULGARIS PROBABLY DUE TO RENAL INSUFFICIENCY. G. W. McCaskey, p. 309.

Twelve years previous to report, the patient had had acute Bright's disease with dropsy. The entire body and limbs were covered with blebs which were for the most part circular or oval, some being elongated. The condition of the skin between the bullæ was normal, excepting where it showed damage from previous long-continued eruption. On the surface of the skin, which appeared to be perfectly healthy, there would be a slight tingling, which perhaps would be rubbed lightly with the finger and almost, the patient declared, within a minute a large bleb would form, a half or three-quarters of an inch in diameter. There was no areola and no inflammatory base. The patient complained bitterly of itching and burning which kept her awake at night. The general condition was rather bad, the patient suffering from indigestion and general debility and weighing less than 100 pounds. The temperature ranged between normal and 100° F. The blood examination showed 80 per cent. of hæmoglobin and from 13000 to 18000 leukocytes, polynuclears from 66 to 82 per cent., and on one of three examinations 10 per cent. of eosinophiles, though the other times there were only 2 and 3 per cent. respectively. When the patient left the hospital she was greatly improved, but not free from bullæ.

PELLAGRA. J. K. Pollack, p. 313.

This article contains a report of four pellagrins, of whom three had died. The author states that the Illinois pellagra commission does not accept the spoiled corn theory, after a year of experiments and study on men and animals. It also claims that Sambon's theory fails, as pellagra exists where the similium reptans does not, and there is no pellagra in districts where this fly exists.

CALIFORNIA STATE JOURNAL OF MEDICINE.

(September, 1913, xi, No. 9.)

Abstracted by CHARLES T. SHARPE, M.D.

LUETIN AS AN AID IN THE DIAGNOSIS OF SYPHILIS. E. S. Loizeaux, p. 360.

A brief historic review of syphilis, the essentials of the Wassermann reaction and a full description of the luetin test of Noguchi, with a report of results found in 52 cases, are to be found in this paper.

The author states that a study of the tabulated cases tends to show:

1. That the reaction is of distinct value in the diagnosis of latent and treated syphilis.
2. That in some cases it is more sensitive than the serum reaction.
3. That it does not react in negative syphilis infections.
4. That it is particularly useful in determining cures in conjunction with the serum reaction, with which it may be used as a control.
5. That it may be successfully applied while the patient is under treatment.
6. That the failures in parasyphilitic cases suggest that there may be some other cause than syphilis for tabes and general paresis.

In support of this last contention, he quotes Robertson in the *Lancet*, 1912, who claims that syphilis is merely a predisposing cause for the parasyphilitic, central nervous diseases, because he has isolated a bacillus of the diphtheroid group—bacillus paralyticus, from the genito-urinary tract. Cultures can also be obtained from the spinal fluid in some of these cases. Typical atonia and paresis has been developed by him, with this organism, in a considerable number of rabbits. Early tabes has been improved by him with a vaccine treatment, and striking results claimed by the intraspinal injection of an antiserum produced in sheep.

BOOK REVIEWS.

GRUNDRISS DER DERMATOLOGIE. VON J. DARIER, Médecin de l'hôpital Saint-Louis. Autorisierte Uebersetzung aus dem französischen von Dr. Phil. et Med. KARL G. ZWICK, Cincinnati, O. Mit Bemerkungen und Ergaenzungen von PROF. DR. J. JADASSOHN, Direktor der dermatologischen Universitaetsklinik in Bern. Mit 122 Textfiguren. *Julius Springer*, Berlin, 1913.

This volume is a translation of Darier's well-known text book, rendered into German by Dr. Karl G. Zwick, who undertook this arduous and praiseworthy task under the counsel and encouragement of Jadassohn. The value of the work is greatly enhanced by the remarks, suggestions and annotations of Jadassohn, distributed throughout the entire text and printed in italics, to differentiate them from Darier's original writing. In the preface, Jadassohn discusses the why and wherefore of the translation of Darier's work into German. No doubt, he says, that many will contend that the German literature contains a sufficient number of works as comprehensive as is this one. Still, the originality of Darier's classification of the cutaneous diseases is in itself sufficient justification for this attempt to disseminate his work more widely among German dermatologists; and there is little doubt, says Jadassohn, that even the French-reading German dermatologist will take more kindly to a work of this kind in his own language, than he would to a book written in French.

Darier's classification is based on the fact that, in the study of dermatology we are always confronted with the differentiation between the pathologic-anatomical changes—the so-called efflorescences—and the actual diseases themselves. The difficulties encountered in the didactic exposition of the subject, brought about by this dualistic state, is not limited to the field of dermatology, but it is more prominent here, because we have been accustomed to designate and describe both groups as independent disease forms. Darier has made the experiment to differentiate the two groups by his arrangement and exposition of the subject matter.

The work is divided into two sections; in the first section (Chapters 1 to 22)

the dermatological basic-forms are described, namely, the eruptive elements (efflorescences) and the cutaneous changes not associated with eruptive manifestations. In the descriptions of these, Darier includes the chief symptom-complexes or syndromes, in which the basic-forms appear as symptoms of the disease. The title of the first section is, therefore, "Morphology of the Dermatoses," under which are included the descriptions of the following cutaneous changes: The erythemas; urticaria, purpura, eczemas; the erythemato-squamous diseases; the erythrodermias, papules and papular dermatoses, vesicles and vesicular diseases; pustules and pustular diseases; bullæ and the bullous diseases; keratoses, proliferating diseases; tubera and tubero-ulcerative diseases, subcutaneous nodes and nodules; ulcerations, ulcerating dermatoses and gangrene; pigment anomalies; atrophies, scleroses and dystrophies; hypertrophies, folliculitides, trichoses, onychoses and hidroses.

The title of the second section is "Nosology of the Dermatoses," comprising chapters 23 to 30. In this section are included the artificial dermatoses, neuro-dermatoses, prurigos and pruriginous diseases, parasitic diseases, infectious dermatoses and pyodermias, bacillary infectious diseases, dermatomycoses, infectious diseases caused by spirochætæ and similar organisms, tumors of the skin. At the end of the book is an addendum devoted to therapy.

Aside from the value of Darier's comprehensive treatment of the clinical aspects of the cutaneous diseases, the work is especially valuable for the histopathological descriptions of many efflorescences, which, though short, are comprehensive and to the point.

The book, which is, practically speaking, the product not only of Darier but of Jadassohn as well, will prove to be an exceedingly valuable addition to the library of the dermatologist.

F. W.

LEHRBUCH DER HAUT- UND GESCHLECHTSLEIDEN, EINSCHLIESSLICH DER KOSMETIK. II BAND: GESCHLECHTSKRANKHEITEN. von Sanitaetsrat Dr. S. JESSNER. 4th Edition. With numerous illustrations in the text and 22 colored plates. *C. Kabitzsch*, Wuerzburg, 1913.

This book of about 200 pages is a really excellent exposition of the subject of syphilis, cutaneous and visceral. The first 15 pages are devoted to chancroid, while the last two or three pages comprise the beginning of the next volume, devoted to gonorrhœa. No mention is made of the so-called "fourth venereal disease."

Though concisely treated, every phase of syphilitic disease is described with more or less detail, depending upon the importance of the subject matter. The author begins with a thorough description of syphilis of the skin, hair and nails. Syphilis of the blood follows, with a short dissertation on the Wassermann reaction, etc. He then takes up syphilis of the internal organs and of the nervous system, much of which is interesting reading to the dermatologist, whose activities, until quite recently, have been rather narrowly confined to only the cutaneous manifestations of the disease. Considerable space is devoted to hereditary syphilis. The last portion of the volume deals with pathology, ætiology, diagnosis, prophylaxis and lastly, the treatment of syphilis. The author's views on treatment and his opinions regarding the use of the old and new remedies are interesting and instructive to a high degree. A good feature of the little volume is the simplicity of the choice of words—the text is "easy reading"—a compliment which one can not pay to many German scientific works in medicine.

As in the first volume of the series, here also, the moulages are strikingly lifelike and the half-tone illustrations equally good.

F. W.

THE JOURNAL OF CUTANEOUS DISEASES

VOL. XXXII

MARCH, 1914

NO. 3

NÆVUS FOLLICULARIS KERATOSUS.*

By CHARLES J. WHITE, M.D., Boston.

Assistant Professor of Dermatology in Harvard University.

THE subject of this peculiar and certainly uncommon dermatosis is a young clerk of twenty-four years, whose family and personal history, so far as recorded, contains no cutaneous anomalies.

On May 8th, 1911, the patient came to the Massachusetts General Hospital exhibiting a peculiar band-like lesion extending around the right thorax, from the lower angle of the scapula to the nipple and varying from an inch to an inch and a half in width. This abnormal condition began to appear at the age of ten, or earlier perhaps, and had progressed in extent ever since. There had never been any subjective symptoms, but during the previous five years the gradual progress of the malady had been punctuated by infections of the affected area, leading ultimately to furuncles which had been lanced as occasion demanded.

On June 23d, 1911, the patient made a second visit to the hospital and remarked that the band of abnormal tissue seemed to be spreading.

The patient was not heard of again until January 28th, 1913, when he came under the notice of the present writer. At this visit it was recorded that the diseased area had extended to a width of three to three and a half inches with a superior branch reaching up into the axilla. The affected skin was simply a uniform mass of widely dilated follicles, crateriform and sieve-like in appearance, and deeply infiltrated. In the arm-pit and below the nipple, the skin was red and hard and elevated and a tentative diagnosis of cancer was made of these secondary lesions. Here and there were the scars

* Read before the 37th Annual Meeting of the American Dermatological Association, Washington, D. C., May 6-8, 1913.

of previously opened furuncles. The diagnosis to be applied to the original condition did not seem so easily determined. The dermatosis was certainly an unfamiliar one. The disease appeared to be simply a follicular keratosis. There was no grease about the skin; there were no comedones or papules or pustules present; there was no dirty discoloration of the tissues; there was no involvement of any other part of the cutaneous surface; there was no record of any other example in the man's family. These seemed sufficient reasons for excluding acne, acanthosis nigricans, adenoma sebaceum or the so-called psorospermiosis. There was no verrucous element manifest to warrant the appellation of *nævus verrucosus* or of *nævus unius lateris*. These eliminations narrowed down the diagnostic possibilities to *nævus sebaceus* or to the only twice recorded (so far as I can determine) *nævus acneiformis unilateralis* of Selhorst (*Brit. Jour. Dermat.*, viii, p. 419) and the *nævus acnéique unilatéral en bandes et en plaques* (*nævus à comédons*) of Thibierge (*Annales de dermat. et de syph.*, vii, 3rd series, p. 1298).

Both of these conditions are uncommon. I have had the good fortune to observe and to study histologically an example of *nævus sebaceus*, as many of you undoubtedly have, and we have found it microscopically to consist of a subepidermal mass of hypertrophied and hyperplastic, arborescent sebaceous glands, while clinically we have perhaps considered it a mollusciform fibroma or one of the so-called soft *nævi*. The other condition mentioned, the *nævus acneiformis*, I imagine, is as rare to most of you as it is to me.

The examples of Selhorst and of Thibierge are practically identical, so it will suffice to describe them as one. They both occurred congenitally in young women and both affected one side of the neck and upper thorax and the corresponding upper arms of the two patients. They both offered a picture of comedones and of multiple scars resulting from secondary infections of the grease-filled, dilated follicles.

So, except for sex, the analogy between these two cases and the subject of this paper is peculiarly striking, save that in the former instances we have to do with comedones and in the latter with dilated follicles free from grease.

However, this final decision could not be made definite until after the histological examination and this study was fortunately possible because of the man's eagerness to have the whole diseased area excised. The operation was performed by Dr. C. A. Porter on February 13, 1913, and scattered portions of the excised mass were immediately prepared for microscopical investigation.

Macroscopical inspection of the slides reveals an unusual picture, for one sees deep, truncate, tubular or irregular-shaped invaginations, dipping deeply into the corium and plugged with fasciculated basic-staining tissue, while the great body of the corium is filled with relatively enormous, circular, oval or triangular cavities, containing the apparently similar nuclear-tinted material.

Microscopically, the sections exhibit the original nature of the anomaly, plus the additional results of inflammation. The essential lesion is a huge, single or compound dilated follicle, ending abruptly in an acute or rounded angle or widening out deep in the corium to form a large bottle-shaped cavity or wen-like cyst. The secondary lesion is a chronic inflammation.

The epidermis in these inflammatory areas under discussion is for the most part considerably altered. The cells of the stratum germinativum show wide interspaces into which the connective tissue projects. The stratum spinosum is decidedly thinned and presents cells separated from each other and containing vesicular nuclei. The stratum granulosum is absent and its space is occupied by an amorphous mass fusing into the stratum corneum, the lower part of which contains elongated nuclei while the upper half is filled with leucocytic infiltrations.

The lateral walls of the comedo-like invaginations are comparatively narrow and composed of scattered spinous cells with an outer boundary of palisade elements. There is little or no perifollicular infiltration. Most of these widely dilated follicles contain simply plugs of attenuated, non-nucleated, delicately stratified, basic horny cells, free from all débris, but here and there superficial infection has occurred and the mouth of the follicle is stoppered by a leucocytic mass, interspersed with Gram-positive, minute coccobacilli; while the underlying space is occupied by swollen horny cells some of which are nucleated and receive in places the basic stains and in others the acid dyes. It is a fact to be emphasized that sebum is wholly absent in all these masses. Around these inflammatory foci there is a moderate cellular invasion.

Throughout the mid-corium are found the huge cystic dilations mentioned above. Rarely these reservoirs may be seen connecting directly with the outer surface of the skin, but for the most part they are cystic, enclosed spaces following closely the characteristics of the dilated follicles described above. For the most part they are surrounded by epidermic layers analogous to the normal superficial epidermis, with the central encysted portions composed of pure keratin. Other cysts have become infected and their walls,

their contents and their surroundings are impregnated with bacteria and leucocytes, while the neighboring vessels are choked with polymorphonuclear elements.

The surrounding infiltration deserves a few words of description, for it is very widespread and deep and consists almost wholly of plasma cells.

The sweat glands and ducts are numerous and inconspicuous, save for a moderate inflammatory infiltration.

The sebaceous glands, queer as it may seem, play no rôle in this process. When present they are small and not even surrounded by the otherwise widespread inflammatory cells. These deeper cyst-like structures are not steatomata—they contain no sebum.

In short, careful observation of the various portions of the excised mass reveals the fact that the sebaceous system can be eliminated absolutely from any concern in the present disease—it is purely a process of dilated follicles and of hypertrophy of their keratinous lining. Thus we must discard at once our only two remaining clinical diagnoses—*nævus sebaceus* and *nævus acneiformis unilateralis*. What remains? Only the unpleasant alternative of adding one more term to dermatological nomenclature.

What shall this be?

We are dealing unquestionably with a *nævus*, if we may accept the definitions of this anomaly of the skin as given by any of the following writers:

Rayer: "All the congenital alterations of the skin in color or in texture ordinarily permanent or limited to one region of the body."

Besnier and Doyon: "All *nævi* are not necessarily demonstrable at the moment of birth."

Unna: "Circumscribed deformities of the skin of hereditary or embryonal origin, appearing at divers stages of life, developing with extreme slowness and distinguishing themselves from the surface of the skin by their form and color."

Brocq: "All the circumscribed deformities of the skin."

Hence the word *nævus* must figure in the title. Secondly, we find a condition of *keratosis follicularis* in a strictly histopathological meaning of the term and therefore it seems fitting to give this apparently hitherto unrecorded condition the title of *nævus follicularis keratosus*.

PLATE XVI.—To Illustrate Article on *Nævus Follicularis Keratosus*, by
CHARLES J. WHITE, M.D.



Fig. 1.

Illustrates the distribution and character of the naevus. Note the widely dilated follicular mouths.

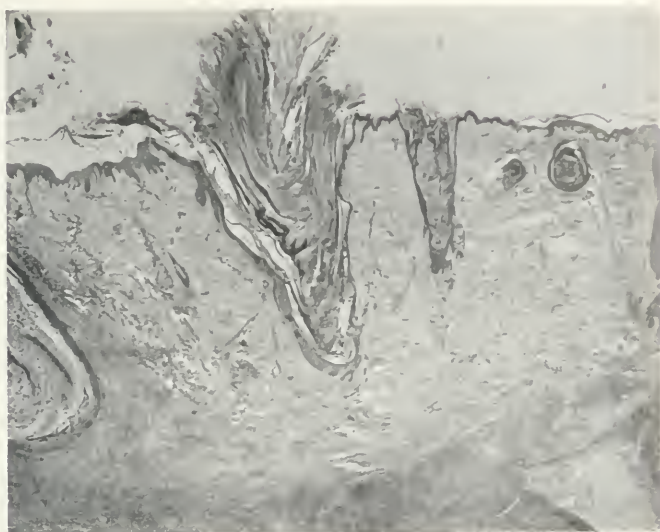


Fig. 2.

Shows the large cone-shaped keratinous plugs above; one sees the wide, dense masses of inflammatory cells.

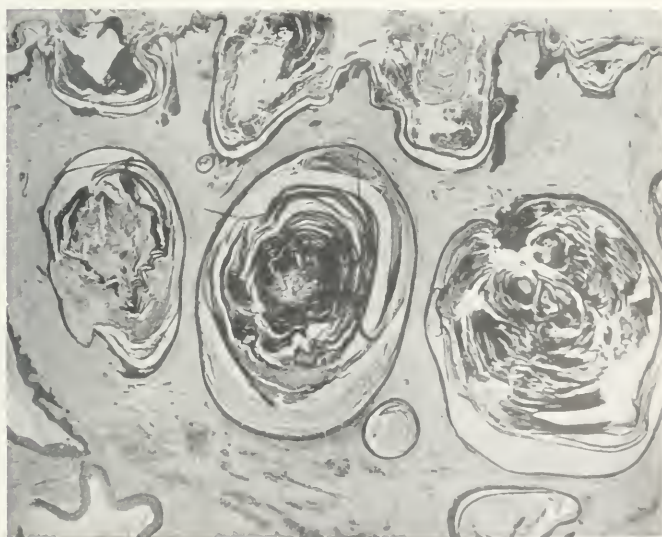


Fig. 3.

Demonstrates the large U-shaped follicular openings filled with horny detritus; and below, the enormous cysts filled with lamellated keratin.

HYPERNEPHROMA WITH LONG-STANDING SYMPTOMS
OF ADRENAL DEFICIENCY, WITH SCLERODERMA
AND SCLERODACTYLIA.*

By HARLOW BROOKS, M.D., New York.

Professor of Clinical Medicine, University and Bellevue Hospital Medical College.

THE present active interest in all conditions associated with disease of the ductless glands, warrants, I believe, the report of this unique instance of an unusual association of lesions evidently of this origin, but widely at variance from the usual picture of processes of this character.

The patient was brought to me in consultation by Dr. Mary Dight, and through her courtesy I have been since able to study the case.

CASE REPORT.

The patient was a male, aged 34 years. He was born in Pennsylvania, of apparently healthy ancestry. He was by profession a concert pianist and composer, at the same time filling a responsible chair in a well known musical college, besides being busily occupied with private instruction.

Of his very early medical history little could be learned, except that as a child he had been subject to frequent attacks of tonsillitis. He was an apt and industrious pupil and at the age of fifteen began to make his own way, supporting himself by teaching a country school, meanwhile practicing very hard at his piano, playing for hours in unheated rooms during bitter cold, so that his fingers frequently became numbed and chilled. At this time he was fairly strong and healthy, though overworked and probably undernourished—always subject to severe attacks of tonsillitis. He then decided to devote himself exclusively to music and while still supporting himself by his own efforts, he entered a well known Boston school of music. As a student here he received frequent honors because of his ability and industry but fell sick with a condition diagnosed by an able Boston clinician, as "congestive chill." This well known internist called attention at this time to the clubbed fingers of the patient, saying that they were not due, as was commonly the case, to cardiac disease.

While in Boston, he suffered from frequent attacks of tonsillitis but none the less he made steady progress in his profession. During this time, as an adopted son, he came under the supervision and medical care of Dr. Dight, to whose skillful services and incessant watchfulness he undoubtedly owed not only his remaining years of life but his very considerable professional success.

In 1902 he went to Vienna and later to other well known musical centres, where, notwithstanding his very frail physique and uncertain health, he made excellent progress, first as student and then as a concert performer of great force and ability. While in Vienna, under the advice of Dr. Dight, he consulted various well known medical and surgical authorities and remained under their care for several months. He was suffering at this period chiefly from anæmia.

* Read before the American Association of Bacteriologists and Pathologists, Washington, D. C., May 9th, 1913.

prostration of severe grade and inanition. A diagnosis of pernicious anæmia was made by one of the best known physicians of Vienna, who gave a prognosis of six weeks of life. Kovach, into whose medical care he shortly passed, made a diagnosis of extreme inanition without apparent physical lesion and finally sent him under Dr. Dight's care to Semmering, where he slowly improved. A tonsilectomy was successfully performed and his physical condition finally became so satisfactory that he went to Munich, where he again took up his work, finally returning to America greatly improved, to accept an important chair in a school of music. Shortly after this he was accepted for life insurance by two excellent companies.

In 1911, after undertaking his scholastic work which demanded upward of thirty teaching hours per week, his health began to fail, he became emaciated, easily dyspnoic and notwithstanding the most watchful and skillful of supervision, he suffered from increasingly frequent myasthenic attacks of most alarming character.

On November 11th, 1911, he came under my observation but was also seen from time to time by others, among them Dr. Alexander Lambert and my colleagues, Drs. Charles Gottlieb and Siegmund Wachsmann.

PHYSICAL EXAMINATION. The patient is markedly emaciated; weight 124 lbs. including underclothing. The skin of the face is drawn, the mouth slit-like and the expression is anxious and careworn, although due to the atrophic condition of the skin of the face, wrinkles are few, even less than normal. The growth of the hair is sparse and dry. The fingers show very marked clubbing with cyanosis of the ends, over which the skin is found calloused, fissured and eroded, the nails curved and cracked. The fingers are tender on firm pressure, although the patient is accustomed to play for long periods, but often with considerable pain and frequently the keys of his instrument become blood-stained. The skin of the hands and face is a dirty brownish shade; no other patches of dermal or mucous membrane pigmentation are discovered. The tongue is moderately coated but no sclerodermatous areas are to be seen on it. There are no scars over the body, no bone tenderness or glandular enlargement.

The thorax is long and narrow, the patient stoops somewhat and the respiratory movements are shallow and slight, though rapid. The abdomen is retracted, though percussion demonstrates that the colon is moderately distended with gas.

The general skeletal musculature is scant and soft and though the movements are slow and lethargic and though he still performs with force and vigor, he becomes quickly exhausted.

Temperature 98.4°F. Pulse 92 to 116. Respiration 26 to 41.

Percussion shows flattening of the note from the fifth rib down on the left side, with râles and occasional disseminated areas of bronchial breathing over this area, alternating with patches of diminished breath sounds. Similar signs are also present on the right side, from the sixth rib down to liver dullness. The breath sounds over both apices are much exaggerated and an area 4 cm. in diameter, corresponding to the location of the right large bronchus, shows exquisite bronchial breathing. Numerous moist râles are present over the entire chest, especially over the apices, and over the bases posteriorly, though the breath sounds are much diminished, râles are still to be made out.

The area of mediastinal dullness is considerably increased, especially at the base but the cardiac outlines cannot be definitely made out either by direct or by auscultatory percussion. The heart sounds are indistinct and weak, of irregular intensity, but no murmurs can be made out and no sternal tenderness can be elicited. There is no tracheal tug. There is marked congestion of the veins of the face and neck, associated with periods of pallor, and slight exercise greatly augments the congestion as well as causing marked dyspnoea. These signs are also elicited by rapid swallowing. Deglutition is apparently accomplished only with considerable voluntary effort. The pulses, though weak, are

equal and synchronous. The superficial arteries and those of the fundus show no apparent sclerosis.

The liver dullness extends three fingers' breadth below the costal margin. The spleen cannot be palpated or demonstrated by percussion. No abdominal masses are to be made out, although there appears to be a high grade of muscular rigidity here present.

The knee jerks are excited, the cremasteric and other skin reflexes are about normal. There is no Babinski, Koenig or other evidence of central lesion and no superficial nerve tenderness.

Blood pressure, systolic 98 mm., diastolic 70-80 mm., varying considerably from moment to moment.

Blood examination shows Hb. 70% (Dare), R.B.C., 3,427,000 per c.mm.; W.B.C., 7,800. Macrocytes and microcytes are frequent. No nucleated cells are present. Differential count normal, no malarial organisms, considerable endoglobular degeneration and marked poikilocytosis.

Urine clear, sp. gr. 1.020, acid. No albumin, sugar, blood or casts. Subsequent examinations practically the same. Blood never found in the urine.

Chief complaints, exhaustion, dyspnoea and muscular pains.

The clinical diagnosis at this time was chronic fibroid phthisis with tuberculosis of the mediastinal lymph nodes and of the peritoneum. The Moro skin reaction for tuberculosis was strongly positive. Frequent examinations of the sputum failed to show tubercle bacilli and at no time was elevation of temperature present, though sub-normal temperatures were frequent. The systolic blood pressure was always below 100 mm. and there was a very narrow margin between systolic and diastolic pressure.

X-ray plates and fluoroscopic examination by Dr. Gottlieb verified the presence of the mediastinal mass and the pulmonary invasion; and showed marked resorption of the bones of the terminal phalanges of the fingers, in some members resulting in complete disappearance of this portion of the bone. Subsequent examination of the left shoulder, in which the patient had complained of some obscure pains, showed here an area of softening located in the external superior aspect of the humerus and measuring fully 2.5 cm. in diameter. Aside from these changes, no osseous lesions were elsewhere demonstrable.

The patient remained at his regular occupation in spite of his weakness, working from six to eight hours daily. He took and digested his food with fair regularity and in reasonable amounts, due to the earnest solicitation of Dr. Dight, who remained almost constantly with him. On December 12th, enlargement of a lymph node in the left axilla was discovered; this subsequently slowly increased up to the time of exitus.

February 22nd, 1911, he was obliged to give up his position in the school of music, but continued to do private teaching at his

home, though he gave up playing and composing. His mind remained clear and bright to the end and periods of considerable relief from even the dyspnoea, difficulty of swallowing and of exhaustion were marked, but emaciation and loss of strength were progressive; early in March he took to his bed, but was occasionally out in a wheel chair. At this time, marked carination of the abdomen was noted. From time to time he had severe attacks of coughing, with the expectoration of fibrinous clots of blood, evidently the casts of bronchi. Cyanosis became progressively more marked and the retrosternal mass increased steadily in size, causing the deformity of the chest noted in the protocol. Digestion remained fairly good, although difficulty in swallowing was continually present, more so at some times than at others.

He died in April, apparently as an immediate result of exhaustion. The autopsy was performed with the assistance of Doctors Carrol and Dight, on the evening of death.

PROTOCOL: The body is that of a greatly emaciated male. The fingers are markedly clubbed, but the toes are normal. It is notable that most of the fissures noted in the physical examination on the ends of the fingers have healed, but the skin of the hands is atrophic and very intimately attached to the subjacent tissues, typically sclerodermatous.

The skin of the face is tightly drawn over the subjacent tissues and its surface is dry and polished, as though varnished. There is a bulging forward of the right thoracic area with a corresponding retraction on the left side anteriorly.

The panniculus is very scant in amount and very highly colored. The voluntary muscle tissue is scant in volume but deep red in hue. On opening the abdomen the fissure of the gall bladder is found in the axis of the ensiform and 6 cm. below it. There are very intimate, dense, old adhesions to the anterior mediastinal wall.

There is a cavity to the right of the pericardium, formed by the retraction of the right lower lobe of the lung. The right pleural cavity is free, except for dense old adhesions over the apex. The pericardial sac is displaced to the left of the median line and is free from adhesions, except at the anterior wall and at the base, where it is attached to and blended with a dense web of adhesions, uniting it to a mass of tumor growth. This tumor is firmly united to the root of both lungs. The left lung is largely atelectic and is so carnefied as to almost sink in water although occasional areas show very marked emphysema; it is otherwise extensively fibrotic throughout, with occasional areas of tumor invasion, apparently extending out from the lymph nodes. The left lower lobe is thus permeated throughout, extending out into the pleura by small miliary bodies, like tubercles, but which are probably new growth granulomata. There are numerous dilated bronchi and bronchiectatic cavities throughout both lungs; these are due evidently to compression of the large bronchi at the root of the lungs, from the mediastinal growth which extends into both lungs but especially into the right one, which is very widely invaded. This lung is practically airless, except that at the apex several cavities are present.

The mediastinal mass is made up of nodular but intimately adherent masses of pinkish white tissue, firm in consistence but giving rise, on compression, to a

milky exudate. This tumor greatly compresses the vessels at the base of the heart and impinges on and invades the cardiac walls, especially that of the right auricle. The œsophagus is involved by an annular neoplastic constriction, above which point the tube is considerably distended. The lymph nodes in this region are almost universally enlarged and invaded, but still show also considerable anthracosis and occasional old healed tubercles. The enlarged node noted in the left axilla is found to be of the same apparent nature as the mediastinal growth. Both the aorta and the pulmonary arteries are greatly stenosed by the growth about them. The walls of the auricles are greatly distended but these cavities are empty. The heart muscle as a whole is soft, deep brown in color, and apparently shows a marked brown atrophy with acute dilatation.

The thyroid body is apparently normal in size and structure. No thymus tissue can be recognized as such because this space is occupied by the new growth. The nerve trunks of the neck, although surrounded, appear to have escaped invasion.

There are apparently a few small metastatic foci in the pleural surface of the diaphragm.

The liver is about normal in size; it is œdematous and apparently shows a moderate degree of fatty degeneration. The gall bladder is moderately distended with clear mucoid bile which may be readily forced through the duct, into the lumen of the small intestine.

The stomach, small and large intestines, are apparently normal, though the mesenteric lymph nodes are prominent and are now grossly invaded by new growth.

The pancreas is large, its tissues firm and it is apparently involved by new growth (see microscopic examination).

The spleen is normal in size, its tissue deeply congested, apparently not invaded by new growth.

The right adrenal body is almost completely replaced by a firm pink-white neoplasm, measuring 2 x 1 and 5 x 3 cm. in diameter. The parenchyma has apparently undergone almost complete atrophy. The medulla of the left adrenal is involved by a similar, though smaller mass and with a consequently less extensive parenchymatous atrophy.

The upper pole of the left kidney is attached to a soft tumor mass, measuring 4 x 5 x 3 cm. in diameter. Although this growth has apparently invaded the kidney, it can, for the greater part, be readily separated from it, seeming to have displaced rather than involved the renal tissue. This growth is apparently highly vascular, though the other masses are of low vascularity. Otherwise the renal tissue shows little abnormality, save for venous congestion. The markings of the kidneys are definite and do not indicate any active renal disease.

The prostate, testes, seminal vesicles and bladder are apparently normal and the large trunks of the abdomen and pelvis show nothing abnormal, save for a few isolated patches of arterio-sclerosis, chiefly of the fatty type.

ANATOMICAL DIAGNOSIS. Tumor of the mediastinum with pulmonary and lymphatic metastases, associated with growths of both adrenal bodies and of the left kidney.

In so far as can be determined from the gross examination alone, it is assumed that the primary growth is probably that in the adrenals or kidney and that the mediastinal and pulmonary nodules are secondary.

Taking into consideration the appearance of the tumor, its probable point of primary origin and its manner of metastasis, together with the clinical history, it is assumed that the growth is a hypernephroma, although the clinical diagnosis of endothelioma cannot as yet be discarded.

MICROSCOPIC EXAMINATION.

The growth is made up of polymorphic cells which are frequently arranged in an acinar manner in all the tissues invaded. In general the cells seem to favor the columnar type, though all forms are to be found and in the larger clumps or acini, the central portion is shown to have undergone necrosis, which has first manifested itself by a nuclear chromatolysis followed by degeneration of cytoplasm. In some areas this central necrosis has amounted to actual production of a centrally situated channel, in the midst of a mass of tumor cells. Quite frequently one sees cells of the multinuclear giant cell type; also a single mass of protoplasm containing as many as six or eight nuclei in which atypical karyokinetic figures are common. In some cases the entire cell is made up of a mass of densely compacted nuclei. A notable lesion of the tumor cells is a tendency toward nuclear vacuolization and atypical karyokinesis.

The cell cytoplasm is granular, acidophylic in reaction and apparently very friable and easily necrosed. There is no definite arrangement in regard to blood vessels in so far as can be observed, but clefts and spaces exist between the cells through which lymph has apparently circulated. The size of the cells varies from that of two erythrocytes to giant cells of very considerable size. In tissues, the growth has apparently infiltrated by invasion along the lymphatic spaces.

In the lymph nodes the growth has displaced more or less completely the adenoid tissue, by growth inward along and into the lymphatic spaces, without displacement of the normal stroma of the nodes and without seriously disarranging the blood supply. Where anthracotic pigment has been deposited, the neoplastic cells have to a large degree taken up the pigment, incorporating it into their cytoplasm.

Where adjacent organs, as the œsophagus, have become compressed by the growth from the surrounding lymph nodes, the invasion of the walls of these viscera has also been along the lymph cleft, separating the normal structures of the organ in question, but apparently mostly without setting up inflammatory reaction or epithelial atrophy.

In the heart muscle, actual invasion through the lymphatic clefts has taken place, with displacement and atrophy of the muscle cells but without disarrangement of the normal stroma. In a few areas, particularly where the epicardium has been invaded, there has been a certain amount of small round cell infiltration, the only evidence of inflammatory reaction. The heart muscle cells, at a distance from the growth, show a marked atrophy with parenchymatous degeneration, nuclear proliferation and in some areas, actual disintegration of the muscle cells. For the greater part the striation is well preserved, except in those cells which show more or less complete disintegration. In some areas widely distant from the gross neoplasm, new growth cells are found in the lymphatic spaces, especially those of the epicardium.

Where the growth has surrounded and compresses the aorta, it is seen that the tumor cells have very diffusely invaded the supporting and adventitious coats but have not extended farther, although lymph clefts occasionally enclose cells apparently of tumor nature. The wall of the aorta shows some swelling and, in a few areas, calcification of the elastic fibres; but the intima is intact and aside from the invasion of the surrounding tissues and the degenerative alterations of minor grade, the aorta appears to be free.

The lung shows an almost universal parenchymatous emphysema, apparently mechanically due to compression of the larger air passages by new growth and consequent alveolar and acinar emphysema. The walls of the distended air sacs and alveoli show interstitial hyperplasia and small round cell infiltration. Where the new growth has invaded the lung tissue, it is found that this has taken place through the lymphoid spaces and not by direct extension or by the blood vessels

which later appear to be in most places even very slightly compressed. The bronchi show practically universal inflammatory involvement, with desquamation of the epithelium and purulent exudation, with areas of microscopic bronchiectasis. In a few places the tumor has ruptured into the bronchi, where, mingled with fibrin and extravasated blood, tumor cells unite to make up the fibrinous plugs which were expectorated during the last few weeks of life.

The liver shows a very general but not extreme fatty degeneration with passive congestion. No neoplastic invasion is apparent.

The pancreas shows no apparent change except where tumor growth has invaded the tissue, the line of advance being, as is the case with the other organs, through the lymph spaces. Aside from this, the structure is practically normal.

The kidney shows a very general parenchymatous degeneration with fatty degeneration of the cortical epithelium. These alterations are most marked in the convoluted tubes, but all the channels are more or less distended, as from back pressure. The blood vessels are acutely congested. No growth was found in any portion of the right kidney, but microscopic examination confirmed the gross diagnosis of tumor of the upper pole of the left kidney. Microscopically, this growth is definitely separated from the true renal structure by an intact capsule which has been perforated at one narrow point only, so that, although the growth has displaced and impressed the kidney structure at the point of apposition, no true invasion of the kidney has taken place. There is nothing in the structure of this growth to indicate its probable age as differing from that of the other nodules, although the tissue here seems to possess more of an individual character and to partake somewhat less of that of the investing stroma, which is less abundant here than elsewhere, while a definite arrangement in regard to lymphatic channels is much less clearly evident here than elsewhere.

The thyroid gland shows nothing microscopically diverging from the usual. Most of the acini are fairly well distended with colloid, though no large cysts are present, and in nearly all a definite membrane of columnar or cubical epithelial cells can be made out. A few acini are filled by proliferating cells, but no evidences of either hyper- or hypo-activity are microscopically evident and there is no new growth invasion.

The adrenal bodies show very extensive replacement of their structure by tumor, which in both organs has apparently originated in the medullary portions of the glands. The large nodule differs in considerable degree from the smaller one, particularly in the fact that the differentiation on this side from the normal, or relatively so, gland tissue, is less evident and the differentiation of tumor from gland cells is less certain. In general, the tumor cells resemble in structure those of the gland, but differ in their cytoplasm, being more highly basophilic and in the more highly chromatic character of the nuclei. About the periphery of the nodule, however, and especially in the right adrenal tumor, cells blend and merge imperceptibly into those of the normal gland and here, as nowhere else in all the tissues examined, is this true. The new growth cells show quite as wide variations in size, form and in nucleation here as elsewhere, and the stroma, which is very scanty indeed, is evidently that of the preëxisting gland. There is no vascularization of the growth and the tumor has apparently received its nourishment chiefly or entirely from the lymph spaces. From place to place throughout the general gland structure are found still remaining single and groups of tumor cells, chiefly recognizable by their altered staining reactions—such cells are apparently lodged in the lymph spaces. Because of these peculiarities present in the growth of the right adrenal body, I am inclined to assume that the growth was primary at this point, and from this focus became eventually disseminated, as detailed in the protocol.

In the recapitulation of this case, the course of the disease ap-

pears so very evident that I feel that I should have made the diagnosis of hypernephroma with adrenal destruction at the time when the patient first came under observation; I have, however, the somewhat dubious comfort of knowing that in so far as we have been able to determine, this diagnosis was not suggested by any one of the numerous physicians who examined the case.

The course of the disease, beginning with anæmia, simulating that of the pernicious type, the profound exhaustion and asthenia, point definitely to adrenal destruction at this time, a conclusion seemingly justified by the apparent age of the adrenal neoplasms. The fact that partial recovery followed onset, is doubtless accounted for by the remnant of normal adrenal tissue which remained.

The unmistakable signs of mediastinal tumor with pulmonary involvement, taken with the history of long standing but slowly progressing illness, are quite diagnostic; while the very slow progress of the neoplasm, associated with the striking absence of cachexia, notwithstanding the extreme emaciation and asthenia, taken together with the pigmentation, should have suggested hypernephroma. On the other hand, the absence of detectable abdominal growth or symptoms and the constantly normal and non-hæmorrhagic urine argued against this possibility and in favor of lymphosarcoma of the mediastinal glands with pulmonary metastases, or of a pleural endothelioma with mediastinal and pulmonary invasion, the two conditions chiefly favored in the diagnosis by my associates and myself.

I find it very difficult to reconcile the typically sclerodermatous changes in the hands and face with the general lesions of the disease, and it would not seem out of place to assume that these changes are entirely independent; but the close association of this change with disease of the ductless glands would perhaps justify us in the inference that the adrenal lesions are, at least in this instance, primarily responsible.

On first thought, the bulbous terminations of the fingers was assumed to be an evidence of hypertrophic pulmonary osteoarthropathy, especially taken in association with the pulmonary signs; but the X-ray plates show an essential and very striking atrophic alteration in the bones themselves, which, taken in consideration with the fact that no similar changes were evident in the lower extremities, rendered this ground untenable.

In so far as we (Dr. Gottlieb and myself) have been able to ascertain, these osseous lesions are entirely unique, except in sclerodactylia, and at first thought we were inclined to consider the change also as trophic and central in origin. This theory was clinically over-

PLATE XVIII.—To Illustrate Article on Hypernephroma with Long-standing Symptoms of Renal Deficiency, with Scleroderma and Sclerodactylia, by HARLOW BROOKS, M.D.



Fig. 1.

Showing the destruction of the terminal phalanges.

thrown when, after the patient had been obliged to retire to bed and to give up his constant use of the piano, although losing generally very rapidly, the cracks and fissures in the skin covering the fingers rapidly healed, and the bulbous appearance of the finger tips improved so markedly that the condition of the digits was the most favorable that it had been for the past fifteen years. It then becomes necessary to resort to some other explanation for this unique deformity; in my opinion the most satisfactory theory rests on the assumption that the lesion was primarily induced by the constant traumatism to which the terminal phalanges were submitted in the early and growing years, as a result of his incessant practice. This factor, associated as it often was with the extreme, almost freezing cold under which he then played, appears to us the most likely explanation of the sclerodactylia, at least in this particular instance.

LINGUAL TUBERCULOSIS (PRIMARY).*

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From the Dermatological Division of the New York Skin and Cancer Hospital.

IN the study of dermatology one can easily be led far afield; this fact proves its intimate relationship with internal medicine. The specialty is like the amœba; it reaches out and engulfs things. It has almost taken possession of those mucous membrane lesions, which are in or near the various outlets of the body, and the interest grows apace. This is just and proper, as so many of the dermatoses exhibit themselves by outbreaks on the mucous membranes.

It is with such lesions that this paper deals, and the two cases of tongue tuberculosis herein reported are not only rare, but bear some interesting features.

Some time ago, a man presented himself at the out-patient department of the New York Skin and Cancer Hospital, with an ulcer on his tongue.

* Read before the 37th Annual Meeting of the American Dermatological Association, Washington, D. C., May 6-8, 1913.

Following a careful examination, it was thought by all the clinicians present that the ulcer was probably luetic; and after taking about 5 cc. of blood for the complement fixation test, the hospital formula for mercury and potassium iodide was given him. The case fell to my care, and the following notes were made.

CASE REPORT.

The patient was a man, aged 37; born in the United States.

Family history: Father is living and healthy at 70. Mother died at 29, from "blood poisoning"; he had two brothers, both of whom are dead; one died in infancy; the other was drowned at the age of 16.

Present state: Man of medium height, weight about 140 lbs. Somewhat pale but well nourished; his body was free from eruption; no scars or other evidence of former disease were noted. There was present on the right side of the tongue an ulcer about one inch long and three-fourths of an inch wide; the long diameter ran parallel with the long axis of the tongue; the anterior border was about one-eighth of an inch from the tip, and the lesion rested on the free border and underneath the organ, the dorsum being free.

The edges were somewhat irregular, sloping and not undermined; the base was grayish-yellow and flecked here and there with punctate, whitish dots. The ulceration was deeper in some places than in others, but might be termed superficial; the patient says he bit his tongue, and from then to the present time, the lesion has slowly but steadily grown larger. The pain is very slight, except during meals, when it is rather uncomfortable.

At this writing the case has been under observation about a year, during which time the ulceration has made its way in a narrow band-like manner just below the tip, to the other side; there it has spread out, producing a similar condition to that on the right side. All this can be seen in the accompanying illustration (Fig. 1).

A part of the frænum has also been destroyed, the lower part still remaining.

From the beginning, an element of doubt existed in my mind as to the syphilitic diagnosis. This doubt was fostered by the clinical appearance, after very careful observation; little attention was paid to his previous history, although he emphatically denied anything of a venereal nature. We know that syphilis is a great imitator; broadly speaking, it may be said to manifest itself on the tongue in three varieties: The early lesions, which are the well-known grayish or yellowish mucous patches; the late, which are generally in the form of gummatous degenerations with much loss of tissue; and the so-called smooth atrophy.

The lesion in question did not conform to any of these varieties. The superficial character of the ulceration, the sloping edges not undermined, the minute white or yellowish dots scattered over the surface, spoke against lues from a clinical standpoint.

The Wassermann test was reported as doubtful; the inhibition

of hæmolysis was not complete, and it could not with certainty be called either positive or negative. Former treatment of the case may have accounted for this obscure reaction; however, the result did not exclude syphilis, and neither did it absolutely prove it. The urine examination disclosed nothing abnormal.

At the next interview, the examination was pushed farther. Upon physical examination, the chest revealed some few indefinite râles and a diffuse, slight dullness on the left side; otherwise it was normal. This dullness is sometimes found in luetic individuals, so the case was still obscure. The Moro tuberculin inunction test was then tried, with a negative result; it was afterward discovered that the tuberculin ointment used was quite old; whether this made any difference or not, is questionable.

A biopsy was now performed; with the cutaneous punch a small piece was removed for microscopical examination, and the laboratory reported the tissue to be tuberculous. This pathological report was not accepted as final, as it is well known that tuberculosis and syphilis, under certain conditions, greatly resemble one another microscopically, and it is impossible to separate them; the infiltration is supposed to be focal in the former disease and diffuse in the latter; the blood vessel changes are at times characteristic in lues, but they are both granulomas, both exhibit giant cells, and in many instances they cannot be distinguished, one from the other, pathologically.

The pathological examination, however, was of great value, since it ruled cancer out of the diagnosis.

HISTOPATHOLOGY.

The histopathological changes were as follows: The section included epithelium, submucosa and muscle. The epithelium was almost entirely ulcerated, the remaining portion being very much thinned. The stratum corneum was lacking and the rete mucosum consisted of six to ten rows of cells. The basal layer was moderately infiltrated with small round cells. There could be seen throughout the entire submucosa and extending down through the muscularis, an enormous number of typical tubercles, separated here and there by extensive hæmorrhages. There was also a diffuse infiltration of small round cells through the whole section.

In practically every tubercle there were central giant cells, sometimes three or four in number; these were in turn surrounded by epithelioid cells, with the usual peripheral layer of small round cells. A mild plasma cell infiltration also occurred in the neighborhood of the tubercles. The centres of many of the tubercles were undergoing caseation necrosis, and the vessels all through the specimen were distinctly dilated.

The muscularis showed hyaline degeneration and was broken up and fragmented by the invasion of the tubercles. In places, the round cell infiltration could be seen between the muscle bundles. The microscopical findings pointed very clearly to tuberculosis (Fig. 3).

In due time a search was made for the bacilli of tuberculosis in the sputum of the patient; the result was negative; the sputum examination was repeated every week for four or five weeks, each time with the same negative result.

The ulcer was then curetted along one of the borders where the disease seemed active, and smears made from the scrapings; thirty or forty slides were examined, but the bacilli could not be demonstrated. At all times during this lengthy examination of a month, the patient continued to take the antisyphilitic treatment in gradually increasing doses.

It was increased in strength, until the amount, taken three times daily, represented Hydrarg. Bichlor., gr. $\frac{1}{10}$ and Kali Iodat., gr. xx. After three months of mouth administration, the treatment was changed to intramuscular injections. The salicylate of mercury was given; at first in doses of gr. $1\frac{1}{2}$ and later increased to gr. 2 every fifth day, the iodide of potash being continued in drop doses.

This plan was followed about two months, until the man began to show signs of salivation. The therapeutic test was then considered complete, and as there was no beneficial change in his condition, syphilis was practically ruled out. Tuberculosis was then considered the correct diagnosis, but still not absolutely proved.

The last step consisted in removing another small section for guinea pig inoculation; this material was injected subcutaneously into the right inguinal region of the pig, and after a lapse of more than two months, the animal was autopsied and tuberculosis was discovered; the inguinal and iliac nodes were enlarged and caseous; both lungs contained small tubercles; the spleen was also enlarged and filled with tubercles. The diagnosis of tuberculosis was then conclusive.

While the study of the case was in progress, another patient with a similar condition came under observation. The second case was referred to me by Dr. J. E. Messenger. Briefly his history follows:

CASE REPORT.

The patient was a man, aged 44, born in the United States. His family and past history threw no light on the case; venereal disease was absolutely denied.

Present state: An ulcer existed on the free border of the left side of the tongue; the size was $\frac{3}{4}$ by $1\frac{1}{2}$ inch, and its anterior edge was about one half an inch back from the tip. The duration was six months.

At that time he noticed a small bleb on the tongue, which ruptured and refused to heal; this gradually increased in size to the present dimensions. The man had also marked laryngitis, his voice being very hoarse; the duration of this was four months. Other than this, his physical condition was very good. There

were no clinical evidences of lung tuberculosis. The ulcer was oval in outline, very superficial, and the base was covered with a yellowish film; two or three of the small whitish dots were apparent, and several of the minute tongue papillae could be seen peeping through the thin film, showing up brilliantly red, about the size of pin points.

The border was sharply defined and not undermined. There was no induration. Mercury and the iodides in large doses had been given to him for several weeks, without effect; for this reason it was thought useless to do a Wassermann test. The treatment was changed to the injection plan, a soluble salt of mercury being used in this instance. The succinamide was chosen so as to fit in with the suggestion of Wright, that this salt is beneficial in tuberculosis and at the same time to carry on the therapeutic test. It was a failure from both standpoints. While the treatment was in progress, an examination of the sputum revealed tubercle bacilli. Death intervened before the study could be extended; the patient began to lose strength very rapidly, his laryngeal lesion became worse, his voice dropping to a whisper, and death followed very quickly (Fig. 2).

Reasons for considering the lesions primary are as follows:

First case. The failure to demonstrate the bacilli in the sputum after repeated trials.

The absence of clinical evidence after careful chest examination.

The fact that the tongue ulcer preceded any lung affection for more than a year.

The negative tuberculin test, possibly meaning that the bacilli were deeply localized in the lesions.

Supposition: The bacilli found a suitable resting place in the trauma caused by biting the tongue.

Second case: The fact that the tongue lesion preceded the laryngitis by more than two months.

That clinical evidence of lung tuberculosis was absent up to the time of his death.

The absence of subjective symptoms.

Supposition: The original bleb was caused by slight trauma, which made a suitable soil for development for the germ. The larynx became secondarily affected. The bacilli found in the sputum came from the larynx.

It would be difficult to prove beyond the shadow of a doubt that the two lesions were primary ulcers, since neither case came to autopsy; but even though they had been autopsied, and tubercles found in the lungs and other organs, it would not be absolute proof that the disease was not primary on the tongue. It would be natural to think that the lungs would be affected before death ensued. So far as can be ascertained, there are extremely few cases of primary tongue tuberculosis on record.

In Buttlin and Spencer's work on diseases of the tongue, an in-

definite reference is made to Nedopil as having had four cases; but on looking up these, it was found that only one could be considered primary; one other had phthisis when first seen, and the examination was by no means complete in the other two. The only other record that could be found was a case of W. Fairlie Clark, reported in the Transactions of the London Pathological Society, in 1876.

The literature on the subject reveals very diversified opinions, as to both the subjective and objective symptoms.

One writer states that the adjacent glands are enlarged in about 50 per cent. of cases; another says, the absence of adenopathy is one of the diagnostic points. The absence of induration is said by one to be characteristic, and another tells of cases with marked induration.

The main features pointed out, which are common to the majority of cases, and in which my experience coincides, are the following:

These lingual ulcers are more common in men than women; they usually occur in middle life, though no age is exempt (no cases in children have been reported); the anterior half of the tongue is the part affected, generally near the tip; they may begin as a bleb, a fissure or a nodule; the condition is usually fatal, in from six months to two and a half years.

In summing up the objective observations made in my two cases, which find corroboration in the reports of many others, it may be said that tuberculous ulcers of the tongue have the following diagnostic points. They usually affect the free border near the tip; the dorsum is generally free; they are, as a rule, very superficial; the base is generally a dirty yellow, dotted here and there with minute whitish specks, which probably represent very small areas of caseation necrosis; the ulcer may be oval or gyrate, but the borders are generally sharply defined against the healthy tissue, sloping and not undermined; the lesions are not indurated and the neighboring glands are very slightly affected.

CONCLUSIONS: First. The diagnosis is extremely difficult.

Second. It is almost impossible to demonstrate the bacilli in the ulcer.

Third. Although syphilis and cancer furnish the majority of ulcerations of the tongue and mouth, they are by no means the only cause.

Fourth. In any case of tongue ulceration, tuberculosis must be reckoned with as a factor.

Fifth. The histopathological examination alone is practically

PLATE XIX.—To Illustrate Article on Lingual Tuberculosis, by
WILLIAM B. TRIMBLE, M.D.



Fig. 1, Case 1.
Showing clinical appearance.



Fig. 2, Case 2.
Showing clinical appearance.



Fig. 3, Case 1.
Showing tubercle formation.

useless as a means of diagnosis between syphilis and tuberculosis, but it is of great aid in excluding cancer.

The majority of tuberculous ulcers of the tongue are in all likelihood secondary; it is very easy to prove that an ulcer is secondary, but to prove that it is primary is quite another matter.

Before closing, I desire to express my sincere thanks to Dr. Egbert Le Fevre for very careful physical examination of Patient I., and also to Dr. W. C. Thro for great aid in the inoculation experiments.

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A STUDY OF INTESTINAL MICROÖRGANISMS WITH REFERENCE TO SKIN LESIONS.

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FOR a long time it has been the opinion of many dermatologists that certain skin diseases are due to intestinal intoxication which may arise from (a) toxines actually ingested with the food, (b) abnormal breaking down of proteids by proteolytic bacteria, or from (c) toxines actually produced by the bacteria themselves.

Some have thought that such toxines are absorbed from the intestinal tract, and may in turn be excreted in the sweat and so be a strong factor in the production of some dermatoses; but, as far as we know, no work has ever been done to support or to eliminate this theory. No investigation has shown that in skin diseases there are any variations from the normal in either the ordinary intestinal bacteria or the proteolytic bacteria which are quite often present, or that any unusual bacterial forms appear.

Obviously a great deal of work is necessary to completely clear up these theories, and this has not been attempted in this study. We have here investigated only the intestinal bacteria which grow *æ*robically on ordinary media. This has been done with special reference to the species present, and the ratios which their numbers bear to each other.

It was necessary first to establish, if possible, a normal standard by the examination of the stools of normal individuals, and then to compare with this standard the findings in the stools of persons suffering from skin diseases.

By such a study it could be readily determined if unusual organisms were present in large numbers, or if any of those normally found in the stools were present in abnormally high proportions; either of which finding, according to the above theory, might account for the cutaneous condition.

Stools from thirteen normal and thirteen abnormal cases were examined. The normal cases were chiefly medical students, living under more or less similar conditions. The abnormal cases were all skin conditions, selected because their *æ*tiology was often referred to some form of intestinal intoxication, or, in a few cases, in order to endeavor to clear up the *æ*tiology of some obscure dermatosis.

All of these cases were examined according to the following technique.

TECHNIQUE.

The stool was collected directly into a small can, which had been thoroughly sterilized by means of a Bunsen burner.

As soon as possible and usually within an hour after the specimen had been obtained it was plated with agar as follows:

Two emulsions of different strengths were made in tubes of bouillon, i.e., one with three and the other with one generous loopful of feces.

From each of these emulsions a series of plates was made, by transferring six loopfuls to the first tube and the same number to each of the succeeding tubes in the usual manner.

The plates were incubated at $37\frac{1}{2}^{\circ}$ C. for forty-eight hours, at the end of which time some one plate, at least, would show from 25 to 300 colonies, and so be suitable for our purpose. This plate was usually the second, though it at times was the first and once the fourth plate.

On such a plate a typical area was selected, and all the colonies in this area, to the number of 25, were transferred to agar slants. Thus in some cases practically all the colonies of the plate were transferred, and in others only one-half, one-quarter, one-eighth, etc., depending upon the number of the colonies on the plate. Colonies so close as to make fishing difficult were not transferred for fear of getting a mixture. By these measures we felt we were getting 25 colonies, which in their ratio were fairly typical of the bacteria in the stools.

The agar transfers were allowed to grow for 24 hours at $37\frac{1}{2}^{\circ}$ C., and then each of the 25 were subcultured to agar slants, litmus milk, gelatin, and to dextrose, lactose, and saccharose broth. Also, each organism was examined by means of a hanging drop and a gentian violet and a Gram stain.

The agar, milk, and gelatin were examined in the first, second, fifth and tenth days. The sugars were discarded at the end of 24 hours if gas had been formed and after the gas formula had been determined; if no gas was formed, they were examined for acid with litmus at the end of 48 hours and then discarded. This routine was followed in all cases except where some very slow growing organisms were isolated, and which required a longer time for their cultural reaction to develop. Also, the reactions of any unusual organisms were always carefully controlled.

Each organism will be described under the case where it first occurs, and will not be referred to under the remaining cases.

RESULTS IN THE SERIES OF NORMAL CASES.

CASE 1. <i>B. coli</i>	19 colonies
<i>B. oxyphilis</i>	2 “
<i>Streptococcus faecalis</i>	4 “

Five colonies showed a small, motile, Gram negative bacillus. It gave an abundant bluish-white growth on agar, and rapidly acidified and usually coagulated milk in 48 hours; coagulation, however, was often delayed until much later, and at times was obtained only by heating. Dextrose and lactose broth were rapidly fermented to acid and gas. Gelatin was not liquefied. This organism corresponds to the *B. coli communis* of Escherich.

Fourteen colonies showed a bacillus identical in every way with *B. coli communis* except that it also fermented saccharose broth to gas. This organism corresponds to the *B. coli communior* of Dunham.

In the remaining cases these organisms will not be considered separately, but will be included as *B. coli*. It is of interest to note, however, that of the 397 colonies of *B. coli* studied, 233 were *B. coli communis* and 164 *B. coli communior*. *B. coli communis* occurred in pure culture twice (normal Case 10 and abnormal Case 9), while *B. coli communior* did not occur in pure culture in any case.

Two colonies showed a bacillus similar to *B. coli* in every way except in its action on sugar broths. Dextrose, saccharose and lactose broth were fermented to acid, but not to gas. This organism corresponds to *B. oxyphilis*, described by Ford in 1903.

Four colonies showed a Gram positive coccus which in smears varied greatly in size, was often quite oval, and only rarely occurred in short chains. In a hanging drop this organism was definitely a streptococcus occurring singly, as diplococci and in short chains which seldom were composed of more than six or eight organisms. It grew rather faintly on agar and rapidly acidified and coagulated milk, though the latter was at times much delayed. It usually fermented all three sugar broths to acid, and did not liquefy gelatine. We have considered this organism and streptococcus faecalis, according to the classification of Andrews and Horder, even though it has not been subjected to the fermentation tests of Gordon. Undoubtedly different strains were present, as these tests would have shown.

CASE 2.	<i>B. coli</i>	22 colonies
	<i>B. oxyphilis</i>	3 "

CASE 3.	<i>B. coli</i>	15 colonies
	<i>B. alkaligenes</i>	1 colony
	<i>Streptococcus faecalis</i>	7 colonies
	<i>Sarcina lutea</i>	1 colony
	Spore-bearing bacillus	1 "

One colony showed a motile, Gram negative bacillus. It turned litmus milk alkaline without coagulation or peptonization. In the sugar broths neither acid nor gas were formed. This organism corresponds to *B. alkaligenes* of Petruschky.

CASE 4.	<i>B. coli</i>	24 colonies
	<i>Streptococcus faecalis</i>	1 colony

CASE 5.	<i>B. coli</i>	11 colonies
	<i>B. alkaligenes</i>	8 "
	<i>Micrococcus zymogenes</i>	4 "
	Spore-bearing bacillus	2 "

Four colonies showed a Gram positive coccus which in a hanging drop occurred singly, as diplococci, and in very short chains, usually composed of not more than three to five organisms. On agar it grew faintly like an ordinary streptococcus. Its characteristic reactions occurred in milk and gelatin. Litmus milk was rapidly reduced and coagulated, followed by at least beginning peptonization in 48 hours; a characteristic pink color accompanied the peptonization, which on standing became blood red. This organism corresponded with the *Micrococcus zymogenes* first isolated by Mac-Callum and Hastings from a case of ulcerative endocarditis.

CASE 6.	<i>B. coli</i>	21 colonies
	<i>B. alkaligenes</i>	4 "

CASE 7.	<i>B. coli</i>	2 colonies
	<i>B. cloacæ</i>	3 "
	Spore-bearing bacillus	1 colony
	Unidentified bacillus	1 "
	Unidentified slow growing bacillus..	5 colonies
	<i>Streptococcus faecalis</i>	4 "
	<i>Streptococcus</i> No. 1 slow growing..	5 "
	<i>Streptococcus</i> No. 2 slow growing..	4 "

Three colonies showed a Gram negative bacillus which acidified and coagulated milk. In the three sugar broths it formed abundant gas, which gave an inverted gas formula. It did not liquefy gelatine. On agar, the growth was neither sticky nor glistening. This organism corresponds to a non-liquefying *B. cloacæ*.

One colony showed a Gram positive bacillus which did not form acid in milk or acid or gas in the sugar broths. This organism was not identified.

Five colonies showed a very slow growing Gram positive bacillus which coagulated milk, but formed neither acid nor gas in the sugar broths. This organism was not identified.

Five colonies showed a very slow growing, Gram negative coccus which on smears and on hanging drops occurred in rather short chains. It acidified and coagulated milk; also fermented the sugar broths to acid. There was nothing especially characteristic in this streptococcus except its very slow growth and its Gram negative stain. This organism was not identified.

Four colonies showed a very slow growing coccus, staining intensely by Gram. It formed no acid in milk, but in an inconstant way formed acid in the sugar broths. In hanging drops and smears it occurred in clumps made up of very long chains of cocci, which clumps were very hard to break up. This feature was very characteristic of this streptococcus. This organism was not identified.

All of these very slow growing forms occurred as minute, deep colonies.

CASE 8. *B. coli* 25 colonies

Twenty-four of these colonies were *B. coli* communior and showed very unusual cultural characteristics. Milk was acidified very slowly. The formation of gas in the sugar broths was most peculiar. In 24 hours, instead of gas being well formed, the saccharose alone showed only a few small bubbles. In the course of three or four days this increased, and the other sugars were slowly fermented. Quite often, and especially in the lactose broth, there was no gas formed for several days, when very suddenly an abundant formation occurred. These reactions were carefully controlled.

CASE 9. *B. coli* 8 colonies *Streptococcus faecalis* 17 “

What appeared to be two strains of streptococcus occurred in this case. On smears, the difference was sufficiently well marked to

cause a note to be made, and the subcultures in milk in every case confirmed these observations.

In smears, one strain was quite oval, varied considerably in size, and short chains of three or four organisms occurred not infrequently. It did not reduce milk and coagulated it only in 48 hours.

The other strain in smears was smaller, much more uniform in size, oval forms were not common and chains were not present at all. It reduced and coagulated milk very positively in 24 hours.

These slight differences in the action on milk would not be at all significant if they had not in every case confirmed a note previously made in regard to difference in morphology. It would have been interesting to have subjected these two strains to the fermentation tests of Gordon.

CASE 10. *B. coli* 25 colonies

This was a pure culture of *B. coli communis*.

CASE 11. *Streptococcus faecalis* 12 colonies

Liquefying streptococcus 4 “

Very slow growing large bacillus.. 7 “

Unidentified bacillus 1 colony

Spore-bearing bacillus 1 “

The liquefying streptococci resembled the streptococcus faecalis in every way except in its action on gelatine, which was slowly liquefied. One of these colonies was replated in order to insure the purity of our culture. Numerous transfers from these plates all liquefied gelatine more or less slowly, but very definitely.

Seven very minute deep colonies showed a large, slow growing, motile, Gram negative bacillus, which on agar slants showed in 48 hours a growth very much like a 24-hour streptococcus growth. In the agar stab, however, the growth was more abundant, showing that probably the organism grew best under anaerobic conditions. There was no reaction whatever on the other media. This organism was not identified.

One colony showed a Gram positive bacillus which gave acid in dextrose broth. This organism was not identified.

In this case not one colony resembling *B. coli* was seen on any of the plates.

CASE 12. Very slow growing, large bacillus.. 22 colonies

Streptococcus faecalis 2 “

Spore-bearing bacillus 1 colony

The very slow growing, large bacillus was identical with the one found in normal Case 11.

In this case, also, not one colony resembling *B. coli* was seen on any of the plates.

CASE 13.	<i>B. coli</i>	19 colonies
	<i>Streptococcus faecalis</i>	4 “
	<i>Sarcina alba</i>	2 “

RESULTS IN THE SERIES OF ABNORMAL CASES.

CASE 1. Erythema multiforme associated with a streptococcus septicaemia:

<i>B. coli</i>	24 colonies
<i>Streptococcus faecalis</i>	1 colony

CASE 2. Pityriasis rosca:

<i>B. coli</i>	19 colonies
<i>Streptococcus faecalis</i>	1 colony
Unidentified bacillus	5 colonies

CASE 3. Erythema nodosum:

<i>B. coli</i>	23 colonies
<i>Streptococcus faecalis</i>	2 “

CASE 4. Chronic urticaria associated with eczema:

<i>B. coli</i>	1 colony
<i>Streptococcus faecalis</i>	13 colonies

Only 14 colonies developed in this case, though it was subjected to the same technique as the other cases.

CASE 5. Pityriasis rosea:

<i>B. coli</i>	18 colonies
<i>Streptococcus faecalis</i>	6 “
Unidentified bacillus	1 colony

One colony showed a Gram positive bacillus which slightly acidified milk and fermented dextrose to acid. This organism was not identified.

CASE 6. White man, 30 years of age. Duration of the affection, since childhood. Yellow pigment almost universally present in the skin, which also shows numerous scars. In certain regions, warty papillomatous lesions are present. At intervals, outbreaks of bullæ occur, which give rise to the numerous scars present. No bullæ were present at the time the patient was under observation.

<i>B. coli</i>	1 colony
<i>Streptococcus faecalis</i>	24 colonies

CASE 7. Pruritis ani with local eczema:

<i>Bacterium Bienstockii</i>	15 colonies
Slow growing streptococcus	10 “

The cultural characteristics of these organisms were very unsatisfactory on account of their very slow growth. The bacillus was probably the *Bacterium Bienstockii*, first obtained from human faeces by Bienstock.

CASE 8. Pruritis associated with extreme urticaria factitia:

<i>B. coli</i>	24 colonies
<i>Streptococcus faecalis</i>	1 colony

CASE 9. Scleroderma (?):

<i>B. coli</i>	25 colonies
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This was a pure culture of *B. coli communis*.

CASE 10. Erythema multiforme:

<i>B. coli</i>	23 colonies
<i>Bacillus paratyphosus</i>	1 colony
<i>Streptococcus faecalis</i>	1 “

One colony showed a Gram negative, motile bacillus, which did not acidify milk. It fermented dextrose broth to gas, but produced no acid or gas in saccharose or lactose broth. This organism corresponds to the bacilli belonging to the paratyphoid group.

CASE 11. Epidermolysis bullosa:

<i>B. coli</i>	20 colonies
<i>B. paratyphosus</i>	3 “
<i>Streptococcus faecalis</i>	2 “

CASE 12. Wooden œdema (?):

B. coli	6 colonies
Streptococcus fæcalis	19 "

CASE 13. Purpura:

B. coli	22 colonies
B. lactis ærogenes	2 "
Unidentified bacillus	1 colony

Two colonies showed a non-motile, Gram negative bacillus, giving the same general cultural reactions as *B. coli*. However, it gave a gelatinous growth in the water of condensation on the agar slant; also formed abundant gas with an inverted gas formula on all three sugar broths. The growth on the agar slant was quite thick and glistening. This organism corresponds to *B. lactis ærogenes*.

One colony showed a Gram positive bacillus which did not acidify milk or ferment the sugar broth. This organism was not identified.

GENERAL CONSIDERATIONS.

B. coli was by far the predominant organism in both series of cases. It occurred in pure culture three times—twice in the normal cases and once in the abnormal cases. In the normal cases it was entirely absent in two instances (No. 11 and No. 12), not one colony resembling it occurring among several thousand colonies. It was rather significant that in these two cases there occurred a large, motile, slowly growing bacillus which was not found in any other case; also that in one of these cases this organism occurred in almost pure culture. In one abnormal case (No. 7) no *B. coli* colonies were transferred from the plates; however, several were present but were not transferred on account of the very small ratio their numbers bore to the numerous colonies of other organisms.

It was at first thought that probably some definite difference would be noted between the normal and abnormal cases in the streptococcus ratio. While such a difference was present, it was not sufficiently constant or striking to be of much value. Only one normal case (No. 9) showed more than 50 per cent. streptococci as against three abnormal cases (Nos. 4, 6, 12), two of which showed practically pure cultures.

The average streptococcus content of the normal cases was 15 per cent. as against 26 per cent. in the abnormal cases.

Of 121 colonies of streptococci transferred from the plates, only 13 occurred as surface colonies.

Various organisms of more or less interest were isolated. Among these was the *Micrococcus zymogenes*, which rarely has been isolated and never before from fæces. Also from one case were obtained streptococci which very definitely liquefied gelatine.

Vaccines were made from the streptococci in abnormal Case No. 4 and from all of the organisms in abnormal Case No. 7. The former did not return to the dispensary after the treatment, and could not be traced. The latter, which was of many years' standing, showed very definite improvement. From these two cases no conclusions can be drawn.

It requires but a glance at the findings in the normal cases to convince one that it is impossible to arrive at even an approximate standard for the flora of stools obtained from normal persons, in so far as the ærobic group is concerned. In fact, the normal cases varied within much wider limits than the abnormal cases.

While this work has shown some rather unexpected variations from what is usually considered normal, nothing of a decided positive nature has been demonstrated, showing an ætiological relationship between the intestinal flora and skin disease. Yet if one considers the results shown in a few of the cases of dermatoses, some striking points are noticed: e.g., in a case of erythema multiforme with an acute, intense and rather extensive eruption associated with a mild streptococcus septicæmia, the streptococcus fæcalis was practically absent in the fæces. The absence of the streptococcus in the fæces and its presence in the blood might explain the appearance of the extensive cutaneous eruption by the fact that the organisms and their toxins were being eliminated by the skin. Streptococci have been demonstrated in the cutaneous lesions of erythema multiforme.

However, as stated above, only one class of bacteria has been investigated in this study. Also, only a few of the various dermatoses have been considered. Further study of other skin diseases and other classes of bacteria such as anaerobic and spore-bearing bacteria may be more fruitful of positive results.

The writer wishes to take this opportunity to express his indebtedness to Dr. T. Caspar Gilchrist, at whose suggestion this work was taken up and from whose clinic the material was obtained. Also to Dr. W. W. Ford, in whose laboratory the work was done and to whom the writer is indebted for many helpful suggestions.

SOME INVESTIGATIONS WITH THE DARK-FIELD ILLUMINATION IN CERTAIN DISEASES OF THE SKIN, ESPECIALLY PSORIASIS, AND IN NORMAL BLOOD.

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THE principle of the dark-field illumination since its discovery by Reade in 1837 had proved of very little practical value in bacteriology until the epoch-making discovery by Schaudinn of the *Treponema pallida*. Schaudinn did not use this method in his discovery, but Landsteiner and Mucha first drew attention to its value in recognizing more easily and in studying the organism of syphilis.

Sidentopf and Zsigmondi, in 1903, using a dark-field instrument, variously improved upon by Queckett, Ross, Shalbold and others, also found a practical use in studying ultra-microscopic particles in various colloidal solutions.

Rachlmann, in investigating solutions of glycogen, found that these particles under the influence of diastase became smaller, and eventually disappeared. By the same method the various cells of the blood have been studied by Hirschfeld, Pappenheim and others, and it was found that such cells as lymphocytes and large mononuclear leucocytes, generally supposed to contain no granules, showed them in abundance.

Elaborate studies of leucocytic amœboid movements have also been made by Schilling and by Merk.

The following investigations, undertaken at the suggestion of Dr. Gilchrist, were carried out during the scholastic year of 1911-12. The principal object was to make use of the dark-field illumination in the investigation of various skin diseases in a routine way, at the same time making especial effort to find, if possible, by this method as well as others, the causative agent of psoriasis. Five cases of psoriasis were examined in a most thorough manner and in the following way:

1. Examination of serum drawn from the epithelium beneath the scales. The lesions selected were of various ages, taking especially those which had a closely adhering scale, so that disinfection could be carried out without the disinfecting fluid reaching the base of the lesion. All instruments and material used were sterile. The areas

selected were at first washed with alcohol and dried with ether, the success of these measures being shown by the fact that very frequently no growth at all of ordinary skin cocci would take place on media inoculated with the serum. After removing the scales, the soft epithelium beneath was carefully rubbed with a sterile sponge, stopping, when possible, just before bleeding began. A suction bulb was now applied and the small amount of serum which exuded from the lesion was collected by bringing it in contact with the cover-slip. The cover-slip was then inverted upon a glass slide, pressed to the desired thickness, and ringed with vaseline. In many preparations from all cases the usual picture consisted of dancing granules of various sizes, occurring usually singly, but at times in pairs, or in small clumps. Cocci were occasionally seen appearing singly or in pairs, and were to be differentiated from the above as they appeared as hollow spheres while the former were homogeneous. Leucocytes and red cells were usually present, the former appearing as a mass of granules, often undergoing amoeboid motion, and the latter showing the various stages of red cell disintegration, to be described later. Occasionally one saw an epithelial cell which was easily identified by its large size. At times highly refractile, bacilli-like bodies of various lengths were seen, the shorter forms often showing a whirling motion due to Brownian movement, the larger ones an undulating wavy motion. These will be described in detail later.

2. Many specimens were made after the following plan: After removal of the scales, epithelium was taken from lesions with a fine, sharp curette and added to (1) normal serum and to (2) patient's own serum. The sera were obtained by drawing blood into sterile Wassermann tubes and allowing it to clot. These specimens were examined immediately by dark-field illumination, and also after various incubation periods at body temperature. Here the picture was very much the same as described in the above, except for the presence of the large number of epithelial cells collected in dense granular masses which, as long as the cell was intact, showed no Brownian movement. Between these masses one saw the dancing granules, cocci, red cell products, and occasionally the various bacilli-like bodies to be later described.

3. Specimens of epithelium added to normal serum, and epithelium added to patient's own serum, were injected intradermally into a number of guinea-pigs and rabbits. In one instance 15 cc. of a mixture of epithelium in patient's own serum were introduced into the jugular vein of a dog, but this was not repeated because of

the difficulty in obtaining such large quantities of epithelium. The animals were observed from two weeks to two months. The lesions healed without leaving any scaling suggestive of psoriasis, nor was there any generalized eruption. The dog seemed to suffer no inconvenience during a period of two months' observation.

4. Blood was drawn from arms of patients with extensive psoriasis into sterile tubes, allowed to clot, and a large number of preparations of the supernatant serum examined at various depths. Here one saw only the dancing granules, with usually, after careful searching, one or two of the longer bacilli-like bodies to be later described.

5. Celloidin capsules, holding about 15 cc., were prepared according to the technique advanced by Mallory and Wright. Some were filled with a mixture of epithelium and serum from blood of a patient, others with patients' serum, without addition of the epithelium. With careful surgical technique they were introduced into the peritoneal cavities of rabbits and guinea-pigs and allowed to incubate from one to three weeks. The animals were then sacrificed and the contents of the capsules, after dark-field examination, injected into the skin of guinea-pigs and into the ear veins of rabbits. The dark-field preparations showed usually an increase in the number of granules, probably due to their liberation from the epithelial cells and disintegrating leucocytes, although the latter were often found intact, as were also red cells. The bacilli-shaped bodies were present, often in greater numbers than before incubation, and occasionally one found clumps of cocci or rapidly motile bacilli.

6. Mixtures of epithelium and serum were injected into the anterior chambers of the eyes of rabbits and, after various incubation periods, small amounts of the fluid withdrawn and examined. This was carried out in only a few instances, as a rather serious inflammatory reaction always followed the introduction of the mixture into the eye. In dark-field examination one saw frequently long granular bands which were most likely the fibrils usually found in vitreous humor. Red cell products and the bacilli-shaped bodies were also present. In one case a large number of formations, as will be later described (Fig. 6), were seen.

Cultures made at the various stages of these investigations on agar, glycerine-agar, and blood-agar (made from the blood of psoriasis patients) remained negative, except for an occasional growth of the ordinary skin bacteria.

As to the results in general, all animal investigations were entirely negative. In those receiving intradermal injections, the lesions

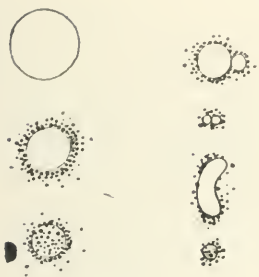


Fig. 1.

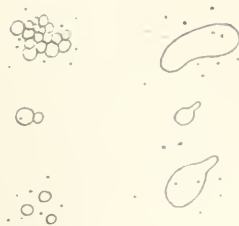


Fig. 2.

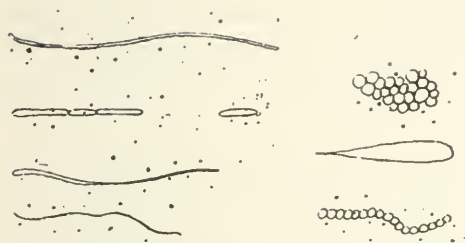


Fig. 3.

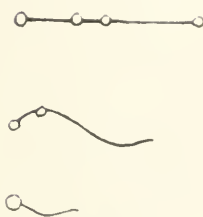


Fig. 4.



Fig. 5.



Fig. 6.

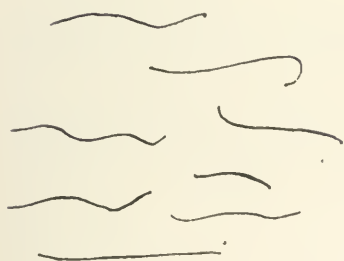


Fig. 7.

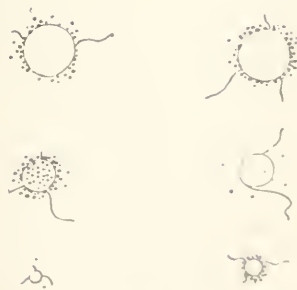


Fig. 8.

healed without leaving any scaling suggestive of psoriasis. The animals receiving intravenous injections of epithelial mixtures all seemed to suffer no inconvenience by this procedure, even after two months' time. The injections of emulsions and serum into rabbits' eyes and the incubation in celloidin capsules were carried out in an endeavor to cause an increase in number of any organism which might be present in too few numbers to be observed in the first examination. Although an increase was observed in some instances, the organism concerned was either a contamination, or bodies which were later found to be products of normal serum or degenerating blood cells.

As to the dark-field examinations, many interesting things were found, but none of these were limited to psoriasis, and with the exception of ordinary skin bacteria, and rarely a few yeast bodies or fungi, I have been able to find practically all of the bodies which might offer any difficulty as to identification in normal blood, after various manipulations.

Many specimens obtained from a large number of other diseases of the skin, such as chicken-pox, geographical tongue, dysidrosis, verruca, lichen planus, the various eczemas, erythema multiforme, erysipelas, molluscum contagiosum, etc., were carefully examined by dark-field illumination, and nothing was found with the exception of a few degenerative products, peculiar to such conditions as chicken-pox and molluscum contagiosum, which differed in any particular from the findings in the other investigations.

PRODUCTS OF NORMAL BLOOD.

These will be considered in detail, as the various modifications of the red blood cells and products of the serum are a more or less constant factor in all preparations made from skin lesions, and some of them may offer diagnostic difficulty. In a preparation of fresh blood made from the finger, in addition to the cellular elements, the serum is seen to be filled with small, highly refractile dancing bodies, the so-called ultra-microscopic particles. These vary in size from those which are barely visible, to those which are somewhat larger than the granules in eosinophile cells, and have been described as molecular complexes of the various blood constituents. The granules are usually single, but in some cases, especially in old preparations where the blood cells are more or less broken up, they may occur in small groups, which may at times resemble groups of cocci. The latter, however, usually appear as small, hollow spheres, while

the granules are homogeneous. By vigorously rubbing the cover-slip so as to cause a breaking up of the cellular elements, these particles are increased in number, undoubtedly due to the liberation of the granules of leucocytes and probably, under certain conditions, to the coagulation of the hæmoglobin of the red cells.

In a fresh preparation the red cells appear as large, round, transparent discs without granules. They may show a slight reddish tint, depending upon the angle of the reflecting mirror, but in any case the entire cell is visible, i.e., it does not appear as a hollow ring. Now, if the cover-slip be vigorously rubbed, various disintegrating forms will be seen. The usual crenated cell will offer no difficulty, but many of the cells, seemingly after discharge of hæmoglobin content, are broken up or shrink into variously sized portions which at first appear as pale shadow rings. The ultra-microscopic particles of the serum do not adhere to the normal cell, but some of these broken cells seem to exert a definite chemotactic action, and around the pale outline the granules will collect in a thick, dancing mass, or at times in more or less irregular rows (see Fig. 1). When the preparation is very thin, these seem to adhere mostly around the periphery, but in thick ones they may collect all over the cell portion, forming a solid mass of shining, dancing particles. In some cases these red cell products may not attract the granules, and then they appear as in Fig. 2, often showing a little projection at one side, resembling budding yeasts. These latter forms are often found in preparations made from skin lesions, and may easily be mistaken for some kind of organism. By the addition of a small amount of a ten per cent. KOH solution to a fresh drop of blood, the formation of red cell products is very much enhanced, and many forms are seen which are not usually found in untreated blood. Under these conditions the cells seem to lose their content, leaving only a very soft, pliable membrane which may, influenced by the various currents in the preparation, produce many curious and bizarre forms. A cell, or cell portion, may become attached at one side, and through effect of a current swing out into a long, undulating, hollow body, as in Fig. 3. Shorter forms of various shapes may be produced from the breaking up of these, forming chains and bunches resembling cocci or longer bodies resembling bacilli (Fig. 3). In some cases these long, bacilli-like bodies may fuse together in areas, leaving at various distances small, round spheres resembling spores, as in Fig. 4.

We shall now consider a formation which is found very frequently in all preparations taken from the skin where there is an

admixture of serum. It may be found in fresh blood taken sterile from the arm, and may easily give rise to error. This body, which I first saw in preparations taken from syphilitic lesions, usually occurs in the average skin preparation as a bacillus-shaped, highly refractive organism, at times slightly clubbed at its ends, and varying in length from 2 to 10 μ and from $\frac{1}{4}$ to $\frac{1}{2}$ μ in width (Fig. 5). It differs from ordinary bacilli, which usually appear as hollow tubes, by the fact that it is homogeneous with a refractive index similar to that of the *Treponema pallidum*. The very short forms due to the Brownian movement may often whirl entirely around, while a wave-like motion is seen in the longer ones which may easily give the appearance of motility. These short forms are a more or less constant factor in all preparations made from psoriasis lesions, and are very likely identical with the organism found lately by Schamberg,¹ which is described as an "actively motile bacillus, varying in length from 8 to 16 μ and $\frac{1}{4}$ μ in breadth." There are two very rare forms which I have seen only a few times, and which are probably modifications of this formation. In the first it possesses a loop at one end and in the second a small, round, flat disc, which may at certain angles shine like a piece of tin in sunlight (see Fig. 6).

In examining sera taken from blood of psoriasis patients, which was drawn from the arm and allowed to clot in sterile test tubes, I was struck by the occasional finding of a long bacillus-shaped body, varying in length from 10 to 20 μ and from $\frac{1}{4}$ to 1 μ in breadth, and often possessing an irregular spiral shape. Its refractive index was about the same as that of the *Treponema pallidum*, and the Brownian movement gave to it a wavy, undulating motion (see Fig. 7). At first I thought I could observe in these a definite motility, and supposed then that I was dealing with some blood parasite peculiar to psoriasis, but I was able to find the same in control specimens collected from the arms of three normal cases. After I began to examine normal blood taken from the finger-tip and found these bodies, as well as the shorter forms described above, I at once identified them as the same formation, the principal difference being one of length, the longer ones tending also to spiral shape and wave-like motion which, if currents were present in the preparation, might easily resemble motility. As these bodies were not found until after the preparation had been observed for some time, I suspected that the trauma due to the focusing of the oil emersion might be to some extent responsible for their formation.

¹ *Jour. Cut. Dis.*, October, 1913, xxxi, No. 10.

So preparations were made and subjected to various degrees of trauma by vigorously rubbing the cover-slip with a toothpick. By this method both varieties, varying greatly in length and breadth, were often found in large numbers, while in the preparation, at first examination, none were present. Often they became attached to the broken red cells, above described, forming at times stellate figures, as in Fig. 8. No further thought was given to these formations at this time, as they were definitely not living parasites, and were thought to be most likely unusual fibrin formations.

Of a late date, under the heading of "A New Spirochæte Found in Human Blood,"² bodies have been described which are undoubtedly identical with those first seen by me in the blood of psoriasis patients. These were found by the author in blood-serum of normal as well as goitre cases, and are described as "actively motile, from 4 to 30 μ in length, some resembling the *Treponema pallidum*, others short and thick like typhoid bacilli." Round, spore-like bodies were often attached to the ends and division took place longitudinally. It is not difficult to see how these formations may be mistaken for living parasites, especially when first observed. The Brownian movement in the longer forms gives to them an undulating motion, and when seen in pure serum, various currents, produced by focusing or drying of the preparation at its border, may give them a progressive motion. I have observed that in very thick preparations currents may be present on the bottom of the slide, while at a higher level there may be none. The spore-like bodies are probably due to the attachment of cell fragments, which is a very frequent occurrence in blood preparations taken from the finger where red cells have been broken up by trauma.

Later I endeavored more definitely to determine the origin of these formations by the following experiments:

1. If blood is allowed to flow in a citrate solution to prevent clotting, none of these bodies are found, and I was not able to produce them by trauma.

2. They are not present in a solution of washed human corpuscles and salt solution.

3. If serum which has been drawn from clotted blood be added to washed red cells from the same patient, they are not found in larger numbers than one should expect to find them in the serum alone, nor is one able to increase the number by trauma.

These results seemed to give definite proof that these pseudo-organisms are most likely products of fibrin formation. Bodies very

² *Lancet*, June 21, 1913. Helen Chambers.

much resembling these may be formed in alkaline solutions of blood and are due, as before mentioned, to the fusion of what appears to be the hull or membrane of the red cells, which at first have been pulled out into long, bacilli-shaped bodies (see Fig. 3).

CONCLUSIONS.—1. Dark-field illumination examination of blood serum and epithelium from psoriasis lesions, after various methods of incubation, yielded no organism which could be supposed to possess any ætiologic relationship to this disease. Routine examination of a number of other skin diseases gave also negative results.

2. Intravenous and intradermal injections into animals of serum and epithelium from psoriasis patients gave negative results.

3. Formations are found in the majority of preparations taken from the skin and blood which resemble live organisms, but which are merely products of normal serum and red blood corpuscles.

DERMATITIS EXFOLIATIVA.*

By A. RAVOGLI, M.D., Cincinnati.

AMONG the general ideas of the squamous eruptions it seems that there are yet some obscure points. Dermatitis exfoliativa is often confounded with eczema, just as if the two diseases were the same affection. Together with dermatitis exfoliativa, we likewise often find mentioned pityriasis rubra of Hebra. It seems that the differential diagnosis of the two diseases may be made when the outcome of each is known.

Pityriasis rubra of Hebra is a rare disease, progressive in character, either produced by, or associated with tuberculosis,—very likely a tuberculide. It always ends fatally. There is, therefore, no need to consider pityriasis rubra of Hebra and dermatitis exfoliativa as belonging to the same type. They are entirely different, ætiologically and clinically, so much so as not to admit of any confusion. The symptoms they have in common are the exfoliation of the epidermis and a diffused redness. On the basis of these symptoms, Besnier formulated a class of affections which he called érythrodermies exfoliatives.

Exfoliating affections with moist scales (Dévérge¹) are to be

* Read before the 37th Annual Meeting of the American Dermatological Association, Washington, D. C., May 6-8, 1913.

classed rather with pemphigus, or to relapsing eczema, as in a case which Rayer² described as general pityriasis with exudation.

Hyperæmia, in the form of a diffused redness, is common to all diseases of this kind and this is one of the principal symptoms of pityriasis rubra of Hebra. In Hebra's disease, the course is essentially chronic, the epidermic scales are thin, small and not easily detached. On the contrary, as shown by McGhie,³ Wilks⁴ and Erasmus Wilson,⁵ in dermatitis exfoliativa the course is rather acute, of comparatively short duration. The scales are large, thick and are easily detached. The general condition of the patient is good and the patient gets well. We believe that erythema desquamativum, exfoliativum, scarlatiniforme and recidivante, described by Ferreol,⁶ is to be classed with our dermatitis exfoliativa.

Brocq,⁷ in his works on the exfoliative erythrodermias, has striven to classify these affections. The differences established by Brocq are based on the benignity and on the malignancy of the dermatoses, on the acute and chronic course, and on the degree of spreading on the surface of the body. This, however, gives no idea of the essence of the disease, and we return to the old position—if the patient gets well the disease is dermatitis exfoliativa, if the patient dies, the disease is pityriasis rubra of Hebra.

Jadassohn⁸ firmly opposes the views of Brocq. He considers so many distinctions to be useless, but he claims that it is necessary to separate dermatitis exfoliativa generalisata (Wilson-Brocq) from pityriasis rubra of Hebra. Jadassohn seriously questions whether dermatitis exfoliativa should be considered as a distinct disease, when from some descriptions it seems to be rather a general squamous eczema, or a pemphigus, than a true pathological entity. Yet, considering some typical cases, as for example, those which are the subject of our study, we find that dermatitis exfoliativa is a typical pathological entity, thoroughly distinct from generalized eczema. Its onset is in an acute form of erythema and the exfoliation occurs soon after the appearance of the erythematous eruption. The general condition is somewhat disturbed. There is no itching sensation present; often the nails and the hair are affected. These symptoms have no relation whatever to squamous eczema, which is characterized by a slow and gradual attack, with papular or vesicular lesions, which after a while will show the formation of thick, adherent scales.

Dermatitis exfoliativa generalisata displays a marked analogy to erythema desquamativum recidivans, and both have to be considered as identical in their entity, but different in their intensity.

Stelwagon⁹ gave a good definition of this disease, together with an elegant illustration, under the name of dermatitis exfoliativa. The last part of his definition, "supervening upon other chronic scaly affections" upsets the first part of the definition, and puts us again in the dark.

If the scaly condition is produced by other skin eruptions, then the nomenclature of dermatitis exfoliativa does not imply any pathological entity, but it is one of simple convenience, to designate the exfoliation of the epidermis which accompanies other diseases.

Neither is the conception of Pusey¹⁰ clear. He refers this disease to three different groups of dermatitis exfoliativa. One, identical with erythema scarlatiniforme, and at times its consequence. Another group as described by Wilson, where the eruption affects the body successively in patches. The third is classed with all scaly dermatoses, secondary to other dermatoses, as eczema, psoriasis, lichen, etc.

Under the name of dermatitis exfoliativa generalisata, Ehrmann¹¹ presented a case at the Berlin Dermatological Society in a man of sixty-two, covered with thick scales on a red, hyperæmic skin. There was no fever and he did not show any reaction to tuberculin. For this reason excluding tuberculosis, pityriasis rubra of Hebra was out of question, and there remained the diagnosis of dermatitis exfoliativa.

We have stated that dermatitis exfoliativa has some analogy to erythema scarlatiniforme, yet both diseases have some points which make them widely separated. In the first, the course is chronic or at least subacute, while in the second the course is an acute one. In both affections the patients have no severe disturbances, not much denutrition, no loss of strength, and the termination of both affections is usually favorable.

The pathological alterations of the skin and the quality of the scales probably will not give us a basis for classification. But the course of the disease, the general condition of the patient, the presence of fever and the denutrition will have great importance in the study and in the classification of the exfoliative erythrodermias.

Both our cases were of a subacute type, one was in a woman, the other in a man.

CASE REPORTS.

The woman (Fig. 1), colored, 40 years old, married, had 14 children, of which 12 are living and in good health. She is a laundress, has worked all her life and has always been well. When a child, she had an attack of erysipelas.

In the Fall of 1911 she began to notice that the scalp was covered with thick

scales, which were easily detached, and the hair also began to fall out. She did not ask any medical advice, thinking it to be dandruff. In 1912, in the Spring, the skin of the hips, back and abdomen began to peel off, accompanied by some itching sensation. The surface of her entire body was erythematous and covered with large epidermic scales.

The general nutrition was good, though she was suffering with gastro-intestinal catarrh. The tongue was coated and after eating she had formation of gas in the stomach. Her bowels at times were constipated, at times loose.

The urine showed no albumin, no casts, only a brownish color; when treated with the chloroform test, this was very marked (indican).

The skin of nearly the whole body was covered with thick, abundant scales, whitish in color, hanging lightly like the peelings of an onion, on the head, face, neck, back, breast, hips, thighs, arms and legs. The back of the hands and feet had some scales, but the palms and soles were normal as were also the finger and toe nails. The surface of the skin showed an even, diffused redness, but no papular elevations nor vesicles. The scales were dry and no exudation was found on the surface of the skin, which really was rough and lacking in natural moisture.

The treatment consisted of painting the body with cod liver oil, in which she was left for several days, wrapped in a woollen blanket. When the scales were all detached and the surface of the skin appeared free from exfoliation, then pine tar was added to the cod liver oil in the proportion of 1 to 3. In less than two weeks the skin appeared perfectly normal; there was no itching, no burning, and she was discharged as cured.

Internally she was treated with salines, and with powders of salol and bicarbonate of sodium.

The second case (Fig. 2), occurred in a man, white, 38 years old, a laborer, of good physique. He had two brothers, one of whom died at the age of 50 from alcoholism, the other being well. Three sisters are living, in good health; no history of tuberculosis is found in his family. The patient claims to have had a similar attack when 25 years old; 15 years ago he had a "chancre," the true nature of which was not determined, but he noticed no bad consequences due to it. He never suffered from gonorrhœa.

When the patient entered the hospital the whole body, from head to foot, was covered with thick, heavy scales hanging on a thickened skin. He was assigned to the dermatological service on September 25, 1912. The eruption had appeared three weeks before. The onset was sudden and accompanied with a burning and mild itching sensation. The whole surface of the skin was erythematous and covered with thick scales. The scales fell off and filled the bedclothes and his underwear. No papules, nor vesicles, nor moisture could be detected. In the axillæ, elbows, and knee-joints, the lines of the skin were deep and accentuated, but no rhagades were present.

In some small areas the heavy thick scales have fallen off. The skin underneath looks cleaner, but small scales are still perceptible. The backs of the hands and of the feet are covered with scales, but the palms and the soles are free. The nails show no alteration.

The mucous membranes are normal, the tongue heavily coated. He had suffered with indigestion, flatulence and abnormal condition of the bowels.

When the patient was admitted, he stated that the eruption appeared three weeks previously, all at once and all over the body, with intense burning and itching, and in a short time he noticed the exfoliation of the epidermis. The urine chemically examined showed neither albumin nor sugar and was found normal in reaction and specific gravity, but contained a great deal of indican.

The blood count gave: white blood cells, 8,000; red blood cells, 5,200,000; polymuclear leucocytes, 65%; large, mononuclears, 5%; small, lymphocytes, 25%; eosinophiles, 2.5%; transitionals, 2.5%.

In order to gain an idea of the pathological process affecting the skin, a piece from his arm was removed for examination. It was hardened in formaldehyde, 4% solution, and then passed through alcohol, mounted in celloidin and cut in sections.

The epidermis detached itself as a thick scale. From the scale, thin layers could be detached, which were stained in hæmatoxylin, showing it to be formed of epidermic strata, which could be easily separated. The epidermic cells do not take the stain and under a low magnification their nuclei cannot be seen. Under a more powerful magnification the epidermic cells appear enlarged, their contours are indefinite and the nuclei can be seen faintly stained. Among the epidermic cells there are groups of round cells, which are better stained and give the impression of being mononuclear leucocytes, which have made their way between the layers of the epidermis.

The sections of the skin were also stained with hæmatoxylin and eosin, polychromatin and some in orcein and hydrochloric acid.

The sections of the skin stained in hæmatoxylin and eosin under low power show that the epidermis is gone, and only a very thin layer covers the papillæ. The papillæ are elongated and enlarged. The blood vessels are visible, and show congestion. The subpapillary layer is also somewhat enlarged and the blood vessels show a marked congestion. A thick infiltration of small cells can be seen between the stroma of the papillæ and of the subpapillary layer. The collagenous tissue of the derma seems to be somewhat thicker, the fibres somewhat enlarged and studded with infiltration cells. Under a more powerful magnification the infiltrating cells are more apparent. In the tissues are seen abundant mast cells, but no plasma cells can be found. The elastic fibres are well maintained and show no alterations. The lymph spaces are enlarged and show an œdematous condition of the skin. The sweat glands show no alterations and their ducts can be seen to reach the papillæ in normal condition.

From the histological standpoint, we see that the epidermis is cast off in large flakes, that the epidermic cells are deprived of nuclei, and that they have no longer the interpapillary elongations, which keep them together. We see some groups of small leucocytes between the disconnected epidermic cells. It may be very likely that a small, scanty exudation in the very beginning takes place, which is capable of detaching the epidermic cells from the papillæ, and of causing them to fall into a necrotic condition, dry up and fall off in the form of epidermic flakes. The most pronounced alterations are found in the papillary layer, in the form of a congestion, accompanied by abundant interstitial exudation. The exudation causes the collagenous tissues to swell up, and especially in the papillary layer, diminishes the cohesion between the derma and the epidermic layers. The epidermis, when detached, has no more nutrition, the cells get dry and through the slight exudation are cemented together, forming these epidermic flakes, which constitute the desquamation.

In reference to the cause: the process is that of an erythema, consisting of hyperæmia, congestion, exudation and cellular infiltration. The cause of the erythematous process is found in the

PLATE XX.—To Illustrate Article on Dermatitis Exfoliativa by
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Fig. 2.
Showing marked exfoliation of epidermis.

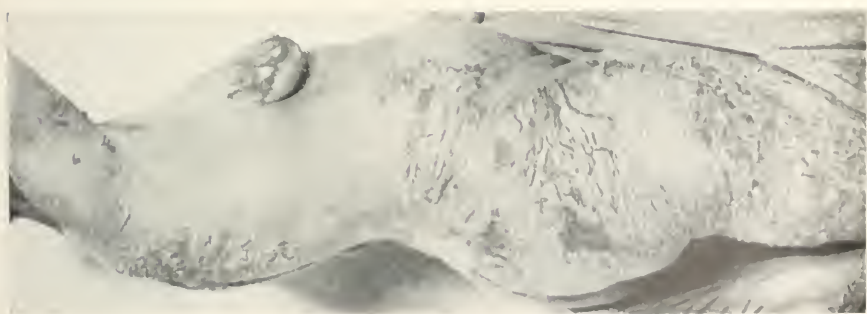


Fig. 1.
Showing marked exfoliation of epidermis.

vasomotor system, which regulates the circulation and the trophism of the tissues. In these cases, it is necessary to admit the presence of a toxic substance, which is formed within the system and taken into the blood current, affecting the vasomotor nerves and producing the effects noted on the skin. In the same way, we must recognize a peculiar condition of the organism, which is unable of producing means of protection against the toxic elements, and in consequence anaphylaxis results.

In both our cases indican was present in the urine. Indican is always the result of the putrefaction of the albumin somewhere in the organism. Indeed, indicanuria is increased in all conditions which favor abnormal intestinal putrefaction, especially when there is stasis of the intestinal contents.

Although the indoxyl compounds are non-toxic, yet they show the presence of ptomaines, which are the toxic elements. In intestinal putrefaction, other elements are produced as phenols, cresols, indol and skatol. It has been proved that whenever ptomaines are absorbed from the intestinal tract, sulpho-ethers of the aromatic bodies are simultaneously absorbed. The anærobic flora in the intestines are putrefactive, and the result of the auto-intoxication is due to the quantity of these putrid matters entering the blood. The intestinal mucosa diminishes the absorption of putrid matters, and so the function of the organic lines of defense—liver, kidneys, pancreas, etc.—increases. In cases in which the lines of defense are broken, as in ulcerations in the intestines, a larger quantity of other toxic substances are absorbed.

In both our cases, the faulty part of the system was the digestive organs, and by improving their function we have been able to obtain favorable results.

In conclusion, I may say that dermatitis exfoliativa is a disease (per se) of the order of the erythemata, that it is entirely separated from pityriasis rubra of Hebra, and likewise from other erythrodermias.

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CLINICAL REPORTS.

HERPES ZOSTER IN A PATIENT WITH SPINAL CORD SYPHILIS.

By HARRY E. ALDERSON, M.D., San Francisco.

Chief of the Dermatological Clinic, Stanford University, Medical Department.

From the Dermatological Clinic, Stanford University, Medical Department.

THE subject of this report (Case 1466-11, Stanford University Medical Dept.) was referred to the dermatological clinic from the neurological clinic on account of a herpes zoster eruption, complicating a localized luetic spinal cord lesion. The patient's syphilis dates back several years, and is of great interest. The following summary of his history is taken from the records of Dr. Walter F. Schaller, chief of the neurological department.

In November, 1911, the patient was in Lane Hospital with a diagnosis of syphilitic laryngitis and a history of a chancre and cutaneous eruption, seven years previously.

In October, 1912, he was again in Lane Hospital with paralysis of the right lower extremity, with crossed disturbance of the sensibility (Brown-Séquard syndrome). Examination of the sensibility made it possible to locate the lesion at about the eighth and ninth dorsal segments of the cord. Salvarsan was given (0.4 gm. three times during a month) supplemented by mercurial inunctions.

In November, 1912, he had appendicitis for which an operation was successfully performed.

In January, 1913, he left the hospital so greatly improved as a result of the salvarsan-mercury treatment, that he could walk without aid. The diagnosis of syphilis was established by the following facts: His blood gave a "three-plus" Wassermann repeatedly; his spinal fluid showed a great increase in its protein content; and his spinal fluid Noguchi test was positive.

On October 7, 1913, he entered Lane Hospital (after having been operated upon at the County Hospital for a hernia in the old appendectomy scar), presenting a typical zoster eruption.

This zoster eruption corresponded to the sensory distribution of the right 9th and 10th dorsal spinal nerve roots. It was quite extensive, originating at a point slightly to the left of the spinous processes and terminating anteriorly 2.5 cm. to the left of the median abdominal line. Posteriorly, it extended from the level of the 11th dorsal to that of the 3rd lumbar spine. At the scapular line its width was 8 cm. and its upper edge at the 10th rib. In the midaxillary line it was 6 cm. wide and its lower edge in the 8th interspace. At the mammillary line, it was 2.5 cm. wide and its lower edge at the costal margin. At the parasternal line, its width was 6 cm. and its lower edge at the level of the umbilicus. At the median abdominal line it was 3 cm. wide and its lower border 2 cm. above the umbilicus. Thus it will be seen that the eruption was within the limits of the distribution of the right 9th and 10th dorsal roots.

The zoster pursued the usual course (under zinc stearate and thymol diiodide powder and an alcohol-menthol lotion), and on the fifth day the patient was dismissed with the cutaneous lesions about well.

The cutaneous eruption was merely an incident in the course of a very instructive case. It is given prominence in this report because the patient presented a definite lesion in those spinal segments which correspond with the distribution of the cutaneous eruption. Whether the process consisted of a small hæmorrhage from a luetic vessel, or a localized congestion and luetic infiltration, cannot be determined. However, it can be said that there was a definite process in the spinal cord, with possible extension to the ganglion.

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A CASE OF PEMPHIGUS VEGETANS.*

By BURNSIDE FOSTER, M.D., St. Paul.

WE are all puzzled¹ from time to time to distinguish between Duhring's herpetiform dermatitis and the various bullous affections of the skin which are grouped under the general name of Pemphigus. I have at the present time under observation several cases which I am not able to classify with certainty. The following quite typical case of pemphigus vegetans which I am going to report very briefly, occurred in my practice last winter and seems to be sufficiently interesting to put on record.

* Read at the 36th Annual Meeting of the American Dermatological Association, Washington, D. C., May 25-27, 1913.

Mrs. G., 31 years of age, was confined and delivered of a healthy child early in September, 1912. She had always been healthy, having had no illness save those of childhood, and her family history is entirely negative so far as the present trouble is concerned. Shortly after her child was born and about five weeks before she consulted me, she noticed an outbreak, which began on her limbs, of bullous lesions which itched and burned a good deal. They would rupture spontaneously in a day or two, leaving an eroded surface. A few days before her visit to me (Oct. 13, 1912) she began to have the same eruption on the mucous membrane of her lips and tongue. Examination showed a well-developed woman, with normal pulse and temperature and with no general symptoms save the eruption on her body and in the mouth. The eruption at this time was quite general; there were many large and small bullæ varying in size from that of a pea to that of a pullet's egg, with large numbers of excoriated and bleeding surfaces on different parts of the trunk and limbs, which showed no tendency to heal. Some of these bullæ were surrounded by an inflammatory area and some were not. In both axillæ and underneath the breasts, the denuded skin was the seat of warty vegetations, which were very moist and from which came a foul odor. Her lips and tongue were covered with moist, white, more or less ulcerated lesions, which were quite painful and prevented her from taking anything but liquid food, and she could take but little of that at a time.

Examination of the urine and of the blood at this time showed nothing abnormal. She did not feel at all sick and refused to go to the hospital and was with difficulty persuaded to stop nursing her infant and go to bed, although the moist lesions on her body, which stuck to her underclothing, made undressing a very painful process. The serious nature of her disease being explained to her, she finally consented to give up her housework and go to bed. I ordered a daily prolonged hot bath, which gave her much relief, various cleansing and antiseptic mouth washes and Fowler's solution internally. Stearate of zinc with balsam of Peru, seemed to be the most satisfactory external application. During the first three or four weeks after I first saw her, she seemed to steadily improve, the bullæ became fewer and finally seemed to cease to appear; the mouth lesions cleared up so that she could eat comfortably, and although the vegetating lesions in the axillæ and under the breasts still remained and were quite painful, they looked better and lacked the foul odor which characterized them at first.

Between the 20th of November and the 1st of December no new lesions appeared and many of the old ones disappeared. Shortly after the 1st of December, new bullæ appeared on her arms and soon on other parts of the body, and within a few days the condition of her mouth was as bad as or worse than it had been when I first saw her. About this time lesions of the same character appeared about the anus and rectum, so that each defecation caused excruciating pain. A few days later it became evident that the mucous membrane of the larynx and trachea was involved, and she soon lost her voice entirely. For the first time she began to show evidence of constitutional failure; albumin appeared in the urine; she had an evening rise of temperature and rapid pulse. Examination of the blood at this time showed considerable diminution of red corpuscles and marked eosinophilia. Numerous lesions appeared on the conjunctivæ and the entire surface of the body was so covered with bullæ and raw and bleeding patches that there was but little normal skin to be seen. She could take practically no nourishment by the mouth, nor could she be fed by rectum on account of the involvement of the mucous membrane of these parts. A more distressing picture it would be difficult to imagine. From this time on the patient became rapidly worse and she finally died in a typhoid condition on Dec. 22, 1912.

Cases of this type of pemphigus are sufficiently uncommon, at least in my experience, to make it worth while to report this one.

SOCIETY TRANSACTIONS

MANHATTAN DERMATOLOGICAL SOCIETY.

L. OULMANN, M.D., *Chairman*.

Regular Meeting, October, 1913.

GUMMOUS OSTEITIS AND PERIOSTITIS OF THE PARIETAL BONES;
EXTENSIVE NECROSIS. Presented by DR. GOTTHEIL.

William T., 54 years of age, was admitted to the City Hospital, Aug. 27, 1913. The patient admitted having had syphilis 20 years ago, and showed the scars and other evidences of destructive luetic processes in the past on various parts of his skin, in his palate, nose, etc. Treatment in the past had been ineffective and intermittent. Some five months before presentation, he noticed a lump on the top of his head, which gradually grew larger and softened, finally broke and had since been covered with a crust. It had been in *statu quo* for a number of weeks. Outside of occasional severe but intermittent headache, there had been no subjective symptoms. At the time of presentation an area three by four inches was affected, whose entire centre was occupied by black necrotic skull bone, with crusted ulceration at the margin. In one or two places along this margin there was a distinct arterial pulsation, as if the meninges and its vessels were protruded through the opening. He had been under a vigorous antiluetic treatment in the hospital, and his cephalalgia was better; he was then to be transferred to the surgical wards for operation.

DR. GOTTHEIL said it was remarkable, as seen in this case, how extensive a destruction of important tissue took place with hardly any local or general reaction. There had been headache, but work had been continued; salvarsan relieved the symptom and the patient had been transferred to the surgical ward for operation.

TERTIARY ULCERATIVE SYPHILODERM COMBINED WITH EPITHELIOMA. Presented by DR. GOTTHEIL.

James L., 53 years of age, had been admitted to the City Hospital, Aug. 7, 1913. For the year previous the patient had been troubled with a sore in the centre of his forehead, which had itched so intensely as to rob him of his sleep. There had been a "birth-mark" before at the place, which had been injured at various times, notably once by a piece of tin. In the few weeks previous to his presentation, the sore had been extending more rapidly. The centre of the patient's forehead was occupied by an extensive superficial circinate ulceration, undoubtedly tertiary syphilitic in nature. At one place, however, the site of the old *navus* and persistent sore, the character of the ulceration was different: there were distinct waxy margins and a sluggish granular base. A portion of this was removed for microscopic examination, and was reported as a basal celled epithelioma. Under the usual antiluetic treatment, the ulceration healed rapidly; the epithelioma remained, but even this healed over and retrogressed after the biopsy. At the time of presentation to the Society, there was no ulceration at all, the syphilis had healed and also the carcinoma, but there was epitheliomatous infiltration which was quite evident. Under the irritation of the biopsy the skin carcinoma had healed over and was apparently cured, as it did after various applications and remedial procedures.

DR. SATENSTEIN said that the case showed a typical epithelioma and that after the section was taken out for biopsy, and the wound sutured with horse-hair

sutures, the lesion commenced to heal rapidly. He said he thought the case one of basal celled epithelioma.

DR. OULMANN said that from his observation of the lesion he would not be inclined to call it one of basal-celled epithelioma.

DR. GOTTHEIL said that aside from the occurrence of a tertiary nodular syphilis covering the area occupied by an old epithelioma, the interest of the case centred in the fact that the cancerous ulceration had healed under the influence of a biopsy and the horse-hair sutures used after it. Of course there was no real cure; the epithelial overgrowth was still present; but the results were precisely similar to the numerous so-called cured cases after the X-ray and other merely irritant treatment. He said he had seen an extensive rodent ulcer, open many years, heal up in this way under a boric acid wet dressing.

SYPHILIS FRAMBÆSIOIDES. Presented by DR. GOTTHEIL.

Pasquale De S., aged 30, had been admitted to the City Hospital, Sept. 26, 1913. Chancere, according to the patient's statement, had been present two years before, treatment being one salvarsan and 15 mercury injections in the City Hospital. The lesion which the patient presented had begun six weeks previously, about one and one-half years after the treatment. It had gradually extended. He showed a typical frambæsiiform nodular syphiloderm occupying the forehead over the left eye, the entire nose and parts of the lip. General adenopathy was still present. For evident reasons, treatment had not yet been begun; it will consist of a vigorous arsenic, mercury and iodine course.

DR. SATENSTEIN said the case was not getting any worse nor any better. The only lesions that had undergone any change were those on the left side. Those on the forehead and nose, the speaker said, had not changed.

PYODERMIA WITH EXCESSIVE SCARRING. Presented by DR. GOTTHEIL.

Isadore U., aged 17, was admitted to the City Hospital on Sept. 8, 1913. Without any previous history bearing on his attack, in May of that year there appeared a swelling on his right shoulder, which grew quite large and filled with pus. A little later, similar swellings appeared on his back between the shoulder blades, and on his upper chest. In July many small nodules, which became large abscesses, appeared on his face and neck. When admitted, his face, neck and shoulders, and the upper part of his chest and back were studded with numerous infective foci in all stages. Some were just beginning, others were fully developed abscess cavities, and others again were ruptured or drying up, and covered with dark brown scabs. There were many comedones over all the affected area. The scars left by the lesions were especially noteworthy. They were irregular, depressed, reddened areas, not deep, but measuring in some cases three-quarters of an inch in diameter. They were entirely different from the scars left by an acne or a furunculosis; yet their location and appearance pointed to a pus infection severe in character but quite superficial in location. Treatment consisted in opening and dressing the individual lesions, strict cleanliness of the parts affected, and the administration of an autogenous vaccine in gradually increasing doses. New infections became fewer, and the patient was practically cured.

DR. HOWARD FOX thought the condition was a severe acne occurring in a tuberculous subject. The eruption was quite similar to that of a case reported by Dr. Trimble as a severe folliculitis and perifolliculitis.

DR. GOTTHEIL said that both the extent and nature of the scarring were very unusual; flat superficial scars, some three-quarters of an inch in diameter, were not the result of an acne or a furunculosis of the ordinary type. The location was that of acne and the few active lesions still present were of a superficial

furuncular type; he had selected the designation of pyoderma as most appropriate, perhaps because most non-committal.

DR. OULMANN said that a von Pirquet test should be taken to see if it were of a tuberculous nature, and that he believed such a development of pus infection is often connected with tuberculosis.

SYPHILITIC ADHESIONS AND ULCERATIONS OF UVULA AND POSTERIOR PHARYNGEAL WALL. Presented by DR. SATENSTEIN.

M. W., 11 years of age, a school girl, was admitted to the City Hospital a few days previous to her presentation to the Society. The onset of the trouble had been noticed one year previously. The child said she could then scarcely eat and that it hurt her to swallow. She could not describe her trouble except to say that her throat felt raw. She stated that she had visited two doctors without relief, but that a third gave her medicine which eased the pain. The condition, when she entered the hospital, was causing her no trouble, and she was taking medicine regularly. At the time of presentation the condition was chronic in character and in point of time. There were only slight remnants of the uvula and tonsillar tissues. The posterior pharyngeal wall was deeply ulcerated and gave a very ragged appearance. Upon the right side in the peri-tonsillar fossa was an apparently active ulcerative process. The inguinal glands were slightly enlarged. The hair and nails were negative. There was a slight vaginal discharge. The hymen had been destroyed and the vaginal canal was fully open. The remains of the hymen and vaginal walls presented a congested and angry appearance. The heart and lungs were negative.

DR. GOTTHEIL believed that the lesions, though late ones, were from acquired syphilis, in spite of the patient's youth; no heredo-syphilitic stigmata were present. The patient, hymenless, had a gonorrhoeal vulvo-vaginitis; it was a case of rape.

DR. OULMANN said that he could not detect any opacity in the cornea of this child's eyes, and stated that it would be interesting to find out if the parents had been examined.

DR. SATENSTEIN said the eyes of this patient had been examined, but no opacity of the cornea of the eyes had been noticed.

SYPHILITIC THROAT WITH NEPHRITIS. Presented by DR. GOTTHEIL.

The patient was a female adult with an extremely bad syphilitic throat and mucous patches in the buccal cavity. The case had a very extensive history, with the additional complication of a nephritis. She had been treated with arsenobenzol and mercury. From the urinary findings, the speaker did not think that the woman had had the nephritis when she entered the hospital. He said it looked like a chronic nephritis with an added acute condition. The patient had been injected with neosalvarsan, and did well since that time, having had three or four intravenous doses. An interesting point in the case was the administration of both salvarsan and mercury during the marked attack of nephritis. The speaker stated that in regard to the nephritis, she probably came to the hospital during the acute exacerbation.

DR. SATENSTEIN said that when the patient was first seen, neosalvarsan was ordered. The following day the house-surgeon found the patient markedly oedematous; the veins could not be seen nor felt; an intramuscular injection of neosalvarsan was given instead; a marked improvement in all her symptoms was noted in a few hours and improvement had steadily progressed.

DR. GOTTHEIL said that he had hesitated a good deal in giving this patient salvarsan. The symptoms were those of an exacerbation of a pre-existent chronic nephritis, and not an acute one, such as we might expect from syphilis in this

stage. Yet the improvement after the first injection was marked, and the nephritis subsided rapidly under the succeeding ones. He would hesitate to claim that this was a syphilitic nephritis, cured by the arsenical medication, but the case was certainly an argument in favor of greater freedom in administering it in nephritic cases, which he was glad to admit, inasmuch as he had in the past drawn attention to the theoretical dangers of the medication under these circumstances.

LEUCODERMA SYPHILITICA; ULCERATIVE SYPHILITIC STOMATITIS AND GLOSSITIS. RECALCITRANT TO TREATMENT. Presented by DR. SATENSTEIN.

M. M., aged 19, female adult, single, a houseworker, was admitted to the City Hospital the September preceding her presentation to the Society. The location of the lesions was generalized, and a rash consisting of many red blotches, the size of a finger nail, broke out all over her body, excepting the face. The patient stated that the lesions would grow larger in size, itched and lasted two months. When she came to the hospital she had "sores" in her mouth. There were no skin lesions present when she was shown to the Society, and the rash which she had the January previous to her presentation had faded, leaving no traces. There were some slightly pigmented areas at the nape of the neck. The left cervical, sub-lingual and sub-maxillary glands were greatly swollen. The throat was slightly congested. Upon the left side of the cheek was an area the size of a quarter with rather firm edges and irregular borders. The base was covered with a grayish slough and here and there tinged with blood. Upon the left margin of the tongue and extending upon its under surface was a similar ulcer, deeper than that described above. This area ran along the margin of the tongue to opposite the last molar tooth. The patient had been treated with four injections of neosalvarsan and six injections of salicylate of mercury with no apparent improvement.

DR. WISE said that in looking over the history of the case, he noticed that the patient had not received any potassium iodide medication and that he had seen cases in which this drug would heal syphilitic mouth lesions, when salvarsan and mercury would fail.

DR. OULMANN said he believed the condition at the base of the tongue to be a secondary lesion and an ulcerative glossitis.

XERODERMA PIGMENTOSUM? Presented by DR. OCHS.

The patient, Mary W., was a child, 6 years of age. Up to the age of 2 years she had had no skin lesions. Then the mother noticed that a few freckles appeared on the right cheek. At first these were light in color, but gradually grew darker and remained so. No new lesions appeared until one year previous to her presentation to the Society, when there was a marked extension of the lesions, so that the whole right side of the face, neck and some small areas on the left side were involved. The lesions would appear as small punctate macules, at first red in color and then in a few days turning to a light brown and later become dark and pigmented. There was no cicatricial tissue to be demonstrated, though some of the individual lesions showed a tendency toward cicatrization. Some under the eyelid showed a tendency to become elevated and verrucous. The glands on the left side were slightly enlarged.

DR. PISCO said the diagnosis of xeroderma pigmentosum was the last he would think of in connection with this case. He stated that after looking over the lesions on the face and their continuation to the shoulder blade, he would call the lesion a *nævus unius lateris*.

DRS. MOUNT, GOTTHEIL, WISE, FOX, BECHET and OULMANN considered the case to be one of *nævus unius lateris*.

DR. OCHS said that DR. GOTTHEIL saw the case with him in May and at that time there were no lesions on the left side of the face at all. The speaker said that the lesions were much more raised some months previously and that he had been watching them gradually sinking down. As regarded the diagnosis of *nævus unius lateris*, the speaker said he never saw lesions on both sides as in this case and new lesions form; that he had seen a few cases of *xeroderma pigmentosum*, and that they all ran the same course, remaining stationary for a while and then breaking down. He said he had seen one case of *xeroderma pigmentosum* of seven years' standing.

XERODERMA PIGMENTOSUM. Presented by DR. HOWARD FOX.

The patient was a man 28 years of age who had been previously shown before another Society (See *Jour. Cutan. Dis.*, 1911, xxix, p. 599), at which time the diagnosis of *xeroderma pigmentosum* was generally accepted. Since that time, a number of epitheliomata had been removed by curettage, followed by cauterization.

DR. OULMANN said he would not advise the use of the X-ray in these cases. He had seen a case developing *xeroderma*-like lesions in a child of 5 years, which had been treated by the X-ray when one year old.

LUPUS ERYTHEMATOSUS. Presented by DR. OCHS.

J. H., female, aged 14, came to Lebanon Hospital early in the July previous to presentation, exhibiting lesions which had been of one and one-half years' duration, entirely confined to the lower part of her legs. In the middle part of her left leg, a lesion with slightly scaly and slightly infiltrated edges about two inches long and one inch wide was seen. On the right leg there were three distinct rounded lesions, varying in size from a dime to a half dollar, brownish in color, somewhat elevated at the edges and scaling at their outer surface. On the ankle was a small, firm, brown nodule about the size of a bean. In the centre of each lesion the skin was decidedly atrophic and when put on a stretch, the cicatricial tissue was seen. None of the lesions caused any itching or any other subjective symptoms. The left knee was swollen and had been aspirated and an X-ray plate was taken to exclude tuberculosis and found to be negative. The disease had spread rapidly and the lesions at the time of presentation were double in size to what they had been.

DR. WISE made the diagnosis of sarcoid of Boeck in this case. The margins of the lesions were raised and there seemed to be more evidence of an infiltrated border on palpating the lesions than one would expect in any type of *lupus erythematosus*. The speaker had never encountered the latter disease limited to the regions below the knees.

DR. GOTTHEIL said if this lesion were on the face or neck of an older person there would be no hesitation as to the diagnosis of *lupus erythematosus*. The infiltration was very slight, and he could not accept the suggested diagnosis of sarcoid.

DR. MOUNT said he agreed with Dr. Wise that it was not a *lupus erythematosus*, and that he could see no adherent scaling on the case. He believed this case belonged to one of the groups of sarcoids.

DR. HOWARD FOX said he agreed with Dr. Wise in thinking that the case was not one of *lupus erythematosus*, partly on account of the presence of distinct nodules. He suggested the possibility of one of the types of sarcoid which occurred upon the legs and resembled *erythema induratum*.

DR. PISCO said he agreed with the diagnosis of *lupus erythematosus*.

DR. OULMANN said he did not agree with the diagnosis of *lupus erythematosus*.

DR. OCHS said he was rather pleased with the discussion of his case. He

said he did not see how it could be possibly mistaken for a case of erythema induratum. He stated that he remembered distinctly having seen a case shown by Dr. Pisko in a colored woman, where the type of lupus erythematosus was markedly nodular and that after the application of the solid carbon dioxide snow vigorously, it retrogressed. The diagnosis of a sarcoid did not enter his mind at all.

SARCOMA CUTIS HÆMORRHAGICUM (SPIEGLER TYPE). Presented by
DR. OCHS.

The patient was a small boy who had been shown at several meetings of the Society, and there was such a marked improvement that even pounding with the fingers on the lesions did not cause pain to the patient. He had been so sensitive previously that even the weight of the fingers caused pain. The boy had been treated with small doses of Fowler's solution with iron. His glands, however, were still enlarged but no longer painful.

DR. GOTTHEIL said this unique case was certainly puzzling; he could not believe that the minute doses of Fowler's solution administered accounted for the remarkable retrogression; it was probably spontaneous. The disease itself, of course, was still present.

NODULAR SYPHILODERM. Presented by DR. BECHET.

The patient, J. F., female, aged 40, showed lesions which had first begun to appear one year previous to her presentation to the Society. At the time she was shown, she had four areas of eruption. The lesions were very extensive, showed a zosteriform distribution and were in various stages of evolution and involution. The case was interesting because of the number and extensive distribution of the lesions.

LEUCODERMA TREATED WITH THE KROMAYER LIGHT. Presented
by DRs. MACKEE and WISE.

The patient was a female, married, aged 31 years, from Dr. McMurtry's service at Dr. Fordyce's Clinic. She had never been pregnant. Nearly the entire body showed the leucodermatous changes, which were of the ordinary diffuse type, excepting on the forearms and hands, where the picture showed a peculiar mottling, the healthy, pigmented parts of the skin resembling large lentigines, on a white background. The general health of the patient had always been good. She was being treated with the Kromayer lamp, experimentally. Three or four séances had not yet brought about any improvement.

DR. PISKO said he had two cases of this condition in private practice, occurring in a mother and son in the same family. He said it was the first time he had ever seen two cases in one family. In the case of the son eugallol (Knoll) was used for cosmetic purposes, with an excellent result.

PIGMENTATION OF THE NAILS. Presented by DR. OCHS.

The patient was an adult negress, who presented a peculiar pigmentation of the nails of both hands. Each nail had from one to four parallel horizontal stripes, extending from the matrix to the end of the nails. The lines of pigmentation were sharply defined and were of varying thickness, from one-eighth to three-eighths of an inch in width. The color was a dark brown, and had existed since birth.

LUPUS ERYTHEMATOSUS. Presented by DR. OCHE.

The patient, Mrs. G. M., aged 30, married, first noticed a number of white spots appear on the left cheek. These soon became red, slightly scaly and appeared in spots varying in size from that of a pea to that of a dime. When first seen in May, she had about 10 in number and confined to the left side of the cheek and the entire chin. Soon after this the right cheek and temple became involved. Upon examination, the speaker found irregular shaped areas, sharply defined, whitened, and slightly infiltrated at the edges. In the centre of each lesion there was slight atrophy to be noted. The disease had spread rather rapidly, though under treatment.

CASE FOR DIAGNOSIS. Presented by DR. BECHET.

E. C., male, aged 40, about six months previously, first noticed a small papular lesion on the left side of the chin, which slowly increased in size. He presented for examination a lesion about one and one-half inches in diameter, rather ovoid in shape, sharply margined, with greatly infiltrated borders, which in certain places showed a tendency to nodular formation. The Wassermann reaction was negative. Several examinations of the hairs at different times showed no sign of tinea.

DR. GOTTHEIL said the case looked something like a lupus erythematosus.

DR. PISCO said he could detect some atrophy and that the borders of the lesions were raised and studded with papules, and made the diagnosis of lupus erythematosus.

DR. WISE made the diagnosis of ulerythema sycosiforme (Unna), a condition also described as lupoid sycosis. It consisted of a form of sycosis which spread slowly by peripheral extension, the patches showing a raised margin, with distinct atrophy in the middle of the lesion.

DR. BECHET said that when he first saw this patient about two or three months previously, he had what looked to be an old X-ray burn. A culture made from the hair was negative, and the X-ray might have had a good deal to do with obscuring the diagnosis.

SCLERODERMA; ACUTE ONSET AND RAPID DEVELOPMENT. Presented by DR. BLEIMAN.

The patient, a male, 45 years of age, stated that his inability to raise his arms and to flex his legs aroused his anxiety as to the cause. This interference in locomotion, at first but slight, soon became quite pronounced, so that at the end of the second week he found it exceedingly difficult to raise the arms higher than the level of his shoulders and to flex the legs no better than about to a forty-five degree angle with the thigh; flexion at the hip was also modified. Examination showed marked induration of the skin and a peculiar leathery feeling. The parts involved were the extensor surfaces of both upper and lower arms, both lower limbs (extensor and flexor surfaces), isolated patches on the back and likewise the abdomen and the face.

Of interest was the acute onset, rapid development and extensive involvement. The patient was under observation since the June preceding. He had had potassium iodide medication (5 grs., t. i. d.). The condition showed considerable improvement.

DR. OCHE said this case reminded him very much of a similar one he had presented to the Society the first part of the previous year, in which the scleroderma was of four weeks' standing. Within seven weeks the whole arm, hands, muscles of the neck and abdomen were so affected that she could not move her limbs and she became bed-ridden.

RHINOPHYMA. Presented by DR. BECHET.

The patient, a male adult, first noticed the beginning of his nasal deformity about 15 years previous to his presentation. There had been a steady increase in the size of the mass ever since. The condition was a very extensive one, the mass covering the entire lower half of the nose. This case was previously presented to the Section on Dermatology at the N. Y. Academy of Medicine.

DR. GOTTHEIL said that years ago he had removed the entire central lobe of the nose in a very exaggerated case of the kind, occurring in a candy manufacturer; the growth returned repeatedly, being operated on three times by well-known surgeons in this city, in the course of ten years. The sections in his specimen showed an enormous hypertrophy of the sebaceous glands, and in his opinion the cases were adenomata of a relatively benign type.

DR. HOWARD FOX inquired whether any of the members had personally tried the method of treating rhinophyma by ablation. He had referred one case to Dr. Haubold at the Harlem Hospital, who had improved the patient's appearance by removing wedge-shaped pieces of tissue.

DR. BECHET said he saw a case which Dr. Kingsbury had presented about one and one-half years previously at the Academy, where a large mass, fully one inch in diameter, had been removed for biopsy. When the man came to the clinic two or three weeks previous to the meeting of the Society, there was absolutely no recurrence.

EPITHELIOMA. Presented by DR. OCHS.

M. W., 48 years of age, male, had been a pipe smoker for some time and presented on the left buccal mucosa a somewhat irregular shaped lesion about the size of a hazel nut. It had white, firmly infiltrated edges, the lesion itself being somewhat ulcerated and broken down; upon being put on the stretch, white pearly nodules were to be seen. Besides this mucous lesion he had three sharply defined patches of alopecia areata on the left side of the jaw, one on the chin, and one on the back of the head. These lesions were about the size of a silver dollar.

DR. GOTTHEIL had had cures that were permanent in these mucosal epitheliomata of superficial type from the use of the solid carbon dioxide.

REVIEW
OF
DERMATOLOGY AND SYPHILIS.

Under the direction of

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ARCHIV FÜR DERMATOLOGIE UND SYPHILIS.

(April, 1913, cxvi, No. 2.)

Abstracted by JOHN H. STOKES, M.D.

EXPERIMENTAL STUDY OF IMMUNITY IN LATE SYPHILIS. FRANZ VON POOR, p. 379.

The author undertook the inoculation of twelve cases of late syphilis exhibiting gummatous skin lesions, with material obtained by excision and maceration, from the patient's own gummata. The inoculations were made by scarification on parts of the skin some distance from the active lesions. The excised nodules had in no case begun to break down, and supposedly contained active spirochætæ. No results were apparent during an observation period of six to twelve weeks. In the light of these negative findings, the writer reviews the theories of Neisser, Hansell, Finger and Landsteiner, who succeeded in producing syphilitic lesions by inoculation of spirochætæ from other luetics, and comes to the conclusion that his own negative results are due to a local immunity of certain parts of a syphilitic individual in the tertiary stage, against his own organisms. The fact that the individual has lesions elsewhere is taken as evidence, however, that such immunity is not general over the whole of the patient's body, there being points of localized susceptibility at which the pallidæ gain a foothold and produce the gummatous lesions present in any one case.

AMYLOID DEGENERATION OF THE SKIN. C. KREIBICH, p. 385.

Continuing his series of studies in the histopathology of the skin, Kreibich reports, in connection with the examination of a pigmented seborrhæic wart in an old man, the occurrence of masses of a hyalin material in the papillæ, especially abundant in association with the vessels of the sub-papillary rete. This material responded to all the microchemical tests for amyloid, as controlled by specimens of

amyloid liver. It was differentiated from hyalin by its dark color in dark-field illumination, hyalin appearing light. Kreibich, from examination of other material from senile skins, concludes that amyloid is not a rare finding and may be regarded as a form of senile change in the cutaneous tissues, not necessarily associated with amyloid elsewhere in the body.

SMALLPOX AND VACCINATION IN BOHEMIA. A. EPSTEIN, p. 395.

This is an extensive and detailed historical account of epidemic smallpox in Bohemia and neighboring states, especially in its relation to vaccination. An interesting incidental conclusion drawn by the writer from some of his statistics is that variola in an ill-vaccinated population is to a large extent a disease of children, 70% of the cases between the years 1900 and 1906 occurring in the first six years of life.

MESOTHORIUM IN DERMATOLOGY. E. KUZNITZKY, p. 423.

The mesothorium used by the writer was secured from two sources, between whose products no noteworthy difference could be detected. The larger portion was obtained from the Gasglühlicht-Aktiengesellschaft (Auergesellschaft), Berlin, and the smaller from Dr. O. Knöfler & Co., Plotzensee bei Berlin. It is marketed at the price of 150 Marks (\$38) per gramme. Twenty grammes in a capsule of five, ten or fifteen centimetres diameter is sufficient for average practical use.

The method is best applicable to solitary circumscribed lesions. Exposures must not be too long on account of the beta-rays which produce inflammation and necrosis. The treatment may be applied in connection with Roentgen rays, Finsen ultraviolet light and with carbon dioxide snow. In common with radium, mesothorium acts by combining the active reaction-producing properties of the Finsen ray with the specific action of the Roentgen ray upon diseased or neoplastic tissues. The combined actions are often so mild in the case of mesothorium as to make the use of this radio-active substance the method of choice in doubtful cases. One must, however, expect a more vigorous cutaneous reaction than with radium. This, however, the author considers of benefit in causing resorption of inflammatory products and newly formed tissue. The gamma-rays were shown to have abundant penetrative power by an accidental burn produced in a case of lupus erythematosus of the nose and external ear, and also by an animal experiment on a rabbit. A comparison with radium showed practically no difference in penetration. The author gives it as his impression that, owing to the peculiar composition of the mesothorium emanation, a more beneficial effect is exerted in certain dermatoses than that obtained with radium.

The technique is that of irradiation with radium. In general, the capsule containing the mesothorium was laid directly on the lesion and bound down firmly to secure a local anæmia, which favors penetration of the rays. An unfiltered ray was used in most cases, but exceptionally, in cases of "prophylactic" irradiations in previously treated carcinomata of the skin and deep angiomata, thin silver or lead foil was interposed. The time of exposure varied from twenty to forty minutes, occasionally as long as one to two hours, the norm being ascertainable only by experience, and depending somewhat on the susceptibility of individual skins to reaction. Estimated on the basis of twenty grammes of mesothorium, forty minutes and more was sufficient for the destruction of most carcinomata, thirty minutes being distinctly too short in two cases which recurred. The reaction is inflammatory, begins in one or two days after irradiation, at first as an erythema becoming brownish in a week, and followed first by serous exudation and then by a necrosis of the epithelial structures, which reaches its height at the end of the second or sometimes the third week. With the serous exudate this necrotic material forms a crust, varying in thickness with the reaction and the length of the irra-

diation. After the crust falls, a reddened scar remains. This rapidly becomes firm and white, with a pigmented margin which finally disappears. The shorter the exposure, the better the cosmetic effect obtained, the best results scarcely revealing the site of the original lesions. It is difficult to obtain the ideal cosmetic effect where vigorous irradiation is desirable. The author appends reports with numerous photographs, covering the following conditions in which the treatment was employed with apparently very gratifying results: carcinoma of the skin, verrucae duræ et seniles, hæmangiomata, nævi vasculosi plani (flammei) and telangiectatic nævi, nævi pigmentosi pilosi, lupus vulgaris and lupus erythematosus. The results in keloid, lupus pernio, lupus of mucous membranes, sclerodermia and dermatitis papillaris are not yet ready for publication.

GIANT CELL TUMORS AFTER INJECTION OF AN ARSENICAL PREPARATION. M. OPPENHEIM, p. 439.

The case reported is that of a woman, 28 years old, who received, six years prior to her coming under the author's observation, a series of twenty-five injections of an arsenic-iron preparation for anæmia. Two years later, at the sites of injection on the arms, small, hard nodules developed. The skin in the affected areas later assumed a livid mottling, with areas of yellowish color and almost sclerodermatous feel, the surface in places being smooth and shiny and in others showing a cigarette-paper crinkle. Palpation disclosed nodular masses, sharply circumscribed, lying in the skin and subcutaneous tissues, with hard, cord-like infiltrations in some parts of the affected areas. The tumors were moderately tender on pressure, but seemed more responsive to changes in temperature. There was no glandular involvement. Idiopathic atrophy of the skin, scleroderma, neurofibromatosis cutis and sarcoma cutis were considered, although the resemblance to these conditions was not striking. Biopsy, with histopathological examination, showed the tumors to consist of an inflammatory granulation tissue, containing large numbers of plasma cells and giant cells. The picture resembled somewhat that of sarcoid, but the author considers it differentiable. No tubercle bacilli could be found. Oppenheim cites experimental work by Hecht on the production of foreign-body tumors, with essentially the same histological structure.

HYPERKERATOSIS PUNCTATA SPINULOSA ET STRIATA CUNICULIFORMIS. K. VIGNOLO-LUTATI, p. 447.

Under this name, the author describes what he believes to be a hitherto undifferentiated dermatosis, belonging to the group of congenital hyperkeratoses. His case was that of a delicate young girl of 13 years, with a negative family and past history and status præsens. The eruption consisted of keratotic follicular plugs, often irregularly grouped, symmetrically distributed over the sides of the neck, shoulders and extensor surfaces of the arms, and reaching its fullest development at the elbows and on the backs of the hands. On the last-mentioned sites, linear ridges were also present and the plugs were almost spinous in character. Their attempted removal by scratching left funnel-shaped depressions, without signs of hæmorrhage and usually with the deeper portions of the plugs still *in situ*. No hairs could be demonstrated in the follicles.

All efforts to discover a parasitic cause for the condition failed. The histological picture is mainly that of hyperkeratosis of various types—diffuse keratosis, follicular keratosis (horny plugs), keratosis around the sweat gland orifices and keratotic thickenings representing the linear elevations mentioned above. The absence of hair in the follicles was notable and many of the follicular plugs had a spinous, thorn-like form. There was moderate atrophy of the Malpighian layer, some acanthosis but no parakeratosis, and some slight congestion of the papillary body and lengthening of the papilla.

Following his description, the author enters into an extended discussion of the diagnosis, considering in detail, Hebra's case of hyperkeratosis follicularis punctata et striata, Neisser's case of lichen atypicus, Bruck's case of lichen ruber verrucosus and the "hyperkeratose congénitale disséminée porokeratosique" of Besnier. On account of the prominence of keratotic spines and unculiform ridges in the case which he describes, Vignolo-Lutati applies to the condition the name given in the title of the report.

A CASE OF ERYTHEMA EXUDATIVUM MULTIFORME HÆMORRHAGICUM, WITH FATAL TERMINATION. A. DE AMICIS, p. 461.

The case described is that of a syphilitic with a latent infection, who, following exposure to the weather, suddenly developed arthritic pains and swelling, œdema of the face, and discrete and polycyclic, confluent, erythematous, maculo-papular lesions, showing varying degrees of œdematous infiltration. There was tremendous involvement, approaching an ulcerative type, of the mucous membranes of the mouth, nose and pharynx. Prostration was extreme, there was severe cough and intense abdominal pain and the case progressed rapidly to exitus. Necropsy showed extensive hæmorrhagic involvement of the serous membranes and the viscera, with amyloid change and acute fatty degeneration in the liver, and the kidney changes of chronic interstitial nephritis. The interesting fact that the patient received an injection of calomel suspension after the appearance of the skin lesions, is excluded by the author from the ætiological factors in the case. The impression which he derived from his histological study of the necropsy material was that the pathological picture in this case of malignant exudative erythema was inflammatory in type, rather than that of a vasomotor disturbance of nervous origin. He could not find satisfactory evidence of a definite bacterial ætiology, however, although he is inclined to regard the process as an infectious one.

DERMATOLOGISCHE WOCHENSCHRIFT.

(Sept. 6, 1913, lvii, No. 36.)

Abstracted by CHARLES GOOSMANN, M.D.

SYMMETRICAL GANGRÆNE OF THE SKIN. R. POLLAND, p. 1059.

In symmetrical skin diseases one is often driven to the conclusion that some disturbance of the central nervous system is an ætiologic factor. Polland reports a case of gangræne of the skin, symmetrically distributed on the shoulders and legs, with a small patch on the forehead. The gangræne was preceded by thrombosis of the superficial veins. A blood count showed leucocytes 60,000, and red cells 3,200,000. Wassermann test was positive. The patient died in spite of anti-syphilitic treatment, and the post-mortem examination was negative except for numerous laminated thrombi in the cutaneous veins.

The symmetric distribution in this case was not due to reflexes from the central nervous system, but Polland believes the direction and rapidity of the blood stream, in certain vascular areas, was responsible. That the extensor surfaces were involved was a characteristic that occurs commonly in affections of hæmic origin, as in erythema or tuberculide, and Polland also believes that the common occurrence of lupus on the face can be explained by the cephalic direction of the blood stream from the lungs, as well as the tendency to hyperæmia and slow circulation of this part of the integument.

Animal experiments on guinea pigs and a rabbit, with intravenous injections of

India ink, failed to show any special localization, but this may be due to the inert and unirritating character of carbon particles.

ON A PURPURA EXANTHEM FOLLOWING BALSAM COPAIBA.
JAROSLAV ODSŤRIL, p. 1066.

After a historical discussion of balsam copaiba, and the skin affections following its use, Odstřil reports a rare case with erythema and numerous petechiae, particularly abundant on the flexor surface of the elbows, the axillae, abdomen and inner surfaces of the thighs. The patient gave a history of having had many persistent attacks of epistaxis, and even superficial cuts showed a tendency to bleed excessively.

After discontinuing the medicine, the skin returned to normal, and subsequently he took copaiba and other balsamics without further trouble.

The article concludes with a discussion of the classifications of purpura, and the theories of its production.

(*Ibidem*, Sept. 20, 1913, lvii, No. 38.)

SYPHILIS IN SPAIN IN THE YEARS OF 1494 AND 1495. KARL SUDHOFF,
p. 1115.

This is a historical discussion on the origin of syphilis. Sudhoff considers the American origin a myth.

DERMATOLOGY AT THE XVII INTERNATIONAL CONGRESS OF
MEDICINE (London, August 6-12.) G. NOBI, p. 1126.

An abstract of the proceedings of the Section on Dermatology.

(*Ibidem*, Sept. 27, 1913, lvii, No. 39.)

ON THE TREATMENT OF SECONDARY SYPHILIS WITH A SODIUM
MERCURY NUCLEIC ACID COMPOUND. ALMKVIST, p. 1147.

After a discussion of various organic mercury compounds that have shown no therapeutic advantages, Almkvist reports clinical experiments with injections of "Quecksilbernucleinsäures natrium" on 9 cases of secondary syphilis. The results were good, but there was considerable local and constitutional reaction, so that the treatment had to be discontinued in 4 cases. Almkvist believes that ulcerative stomatitis and colitis is not always due to a precipitation of HgS in the capillaries of a mucous membrane, from the local penetration of H₂S.

The above named compound, however, is not precipitated by H₂S, and therefore not likely to cause stomatitis. One case with necrotic ulceration of the tongue and gums, due to metallic mercury, was treated with the new remedy, with gradual cure of the stomatitis.

(*Ibidem*, Oct. 4, 1913, lvii, No. 40.)

A CONTRIBUTION TO THE HISTOLOGY OF CONGENITAL MUCOUS
MEMBRANE CYSTS ON THE RAPHE. SHI. MATSUMOTO, p. 1171.

A detailed study of a cyst on the raphe of the penis, with a review of the literature.

ON THE INTRAVENOUS INJECTION OF CONCENTRATED NEOSAL-
VARSAN. MAX JOSEPH, p. 1176.

Joseph criticises the syringe described by Fontana (*Dermat. Wchensh.*, Aug. 30, 1913, lvii, No. 35, p. 1032), and recommends a Record syringe, or still better, the Astra syringe, "Modell Rote Marke," made by W. Elges, Berlin.

(*Ibidem*, Oct. 11, 1913, lvii, No. 41.)

THE RELATION OF ULCUS MOLLE SERPIGINOSUM TO GRANULOMA VENEREUM. W. GENNERICH, p. 1195.

Gennerich reports in detail three cases of *ulcus molle serpiginosum*, with histologic and bacteriologic study. A Gram-negative streptobacillus was found in all. The chief histologic picture was a diffuse infiltration with plasma cells, lymphocytes and leucocytes. A few giant cells were found. The infiltration was most abundant along the blood and lymph channels. In the older portions necrosis occurred, followed by the production of abundant granulation tissue. Of the three cases, one had been diagnosed *granuloma venereum*, and did resemble one of the cases reported by Grindon (*Jour. Cutan. Dis.*, April, 1913, No. 4, p. 236). Another had been diagnosed *tubero-ulcero-serpiginous syphilide*. All three were cured in 2 to 5 months by Neisser's method of phenol cauterization and iodoform applications. The cases were very extensive as shown by the excellent photographs. Gennerich believes that *ulcus molle serpiginosum* and *granuloma venereum* have many features in common. (*To be concluded.*)

ON THE VALUE OF SOME NEWER REMEDIES IN THE TREATMENT OF BALANITIS. NIKOLAUS HEGEDIIS, p. 1208.

Hegediis places the relative values of vioform, tannophen, dermatol, xeroform, and novojodin in the above order, vioform being not only best, but cheaper than most of the others.

(*Ibidem*, Oct. 18, 1913, lvii, No. 42.)

THE REDUCTION OF CUTANEOUS AND GENERAL SENSITIVENESS BY INJECTIONS OF PATIENT'S SERUM, PATIENT'S BLOOD AND SODIUM NUCLEINATE. BODA SPIETHOFF, p. 1227.

Spiethoff has observed a lessened irritability of the skin following his method of venesection and re-injection of the blood or serum. A case of *eczema madidans* is described, in which nothing but soothing lotions could be used, although complete healing could not be obtained with these. After injection of the patient's own blood, he tolerated the stronger remedies and went on to complete cure. A case of psoriasis, that could not use chrysarobin without severe dermatitis, was similarly benefited. Not all cases respond so readily, and in these Spiethoff gives 5 to 10 intramuscular injections of *natrium nucleinicum* (Böhringer), each injection consisting of 5 cc. of a 10% solution.

In those cases in which repeated salvarsan injections are followed by fever and other reaction, injections of patient's serum or blood has prevented further trouble in some cases, but not in all. The exact technique is not described in this article, but reference is made to the author's articles in the *Münch. med. Wochensh.*, 1913, No. 10, and *Med. Klin.*, 1913, No. 24.

Luithlen has shown in animal experiments that parenteral injections of blood or serum from the same animal or species increases the resistance of the skin to irritants. Witte's peptone, gelatin, and other colloids of non-albuminous nature, such as soluble starch, act similarly. Spiethoff would include in this group the before mentioned sodium nucleinate.

THE RELATION OF ULCUS MOLLE SERPIGINOSUM TO GRANULOMA VENEREUM. W. GENNERICH, p. 1230 (*Concluded*).

In *granuloma venereum* Martini found capsulated diplococci, Siebert diplococci, Flu capsulated bacteria, Crocker ordinary pyogenic cocci, Wise and MacLennan spirochætæ, and Donovan and Carter, bean-shaped bodies resembling protozoa.

Gennerich believes all these organisms due to mixed infection, and that the streptobacillus will, in the end, be found the ætiologic factor. He suggests the use of strepto-bacillus vaccine, as recently prepared by Ito in Neisser's clinic, as a therapeutic test. Clinically, granuloma venereum differs from ulcer molle serpiginosum only in the greater amount of granulation tissue and keloid-like ridges. These slight differences may depend upon the secondary bacterial invaders.

(*Ibidem*, Oct. 25, 1913, lvii, No. 43.)

THE TREATMENT OF SYPHILIS WITH CONTRALUESIN. (RICHTER).
JULIUS FÜRTH, p. 1251.

Richter's article on Treatment with contraluesin was abstracted from the *Dermat. Wchnsch.*, July 26, 1913, lvii, No. 30. Now Fürth reports five cases treated with contraluesin, with such poor results, that the treatment was changed to salicylate of mercury injections.

THE PERCUTANEOUS ADMINISTRATION OF LIPOIODIN. JULIUS
HOCHSTATTER, p. 1255.

The use of ointments containing potassium iodide is unsatisfactory, because the medicament is not soluble in the fat ingredients of the skin and tissues. Lipiodin, dissolved in vasogen, has been used by Hochstätter, who found it to be rapidly absorbed, odorless, and free from local irritant action or the production of iodism. In an intractable case of eczema of the penis, a 40% ointment of lipiodin achieved a cure in 10 days. An associated struma was similarly treated, with benefit. In epididymitis, daily applications hastened resorption, and in one case with associated arteriosclerosis the blood pressure was considerably reduced, and other symptoms improved. A child with favus was rapidly cured with a 5% ointment. In prostatitis, a suppository containing 3.0 lipiodin is introduced twice daily, with benefit.

ON ANOTHER USE FOR "ACETONAL" SUPPOSITORIES. WOCKENFUSS,
p. 1258.

Encouraged by the astringent and analgesic properties of "Acetonal" suppositories in cases of hæmorrhoids, Wochenfuss used them with very good results in severe cases of acute prostatitis and pruritus ani.

DERMATOLOGISCHE ZEITSCHRIFT.

(April, 1913, xx, No. 4.)

Abstracted by PHILIP FRANK SHAFFNER, M.D.

A RARE ANOMALY IN HAIR GROWTH. HOCHSTETTER, p. 316.

Hochstetter reports a case of paint brush hair, "Thysanothrix." Histologically, an excised piece of skin shows that the hair tufts do not originate from a division of the hair shaft. The author believes that the multiple hairs may be due to the presence of a composite hair follicle.

THE AMERICAN ORIGIN OF SYPHILIS IN THE MIDDLE OF THE
FIFTEENTH CENTURY IN ITALY. SUDHOFF, p. 325.

THE DISCOVERY OF SYPHILITIC SPIROCHÆTÆ IN THE BRAIN CORTEX IN DEMENTIA PARALYTICA BY H. NOGUCHI. H. HOFFMANN, p. 375.

Hoffmann presents a summary of Noguchi's work in finding spirochætæ in all layers of the brain cortex in twenty per cent. of his cases of paralysis. The spirochætæ are absent in the pia and show no relation to the blood vessels, being found more in the brain substance itself. Noguchi found spirochætæ in the spinal cord in twelve cases of tabes.

(*Ibidem*, May, 1913, xx, No. 5.)

THE FATALITIES AFTER INTRAVENOUS INJECTIONS OF SALVARSAN AND NEOSALVARSAN. E. TOMASCEWSKI, p. 283.

Tomaszewski believes that neither technical errors or the Herxheimer reaction in cerebro-spinal syphilitic areas, or anaphylactic phenomena, can be held responsible for these fatalities. The author believes that not more than three to four decigrammes of salvarsan is to be recommended; further, he urges a sufficient dilution, one part to five hundred of the diluent. He also recommends ten to fourteen day intervals between any two injections in order to allow ample time for any secondary reaction which may be produced through metabolic or functional accumulative action. Moreover, all apparently insignificant disturbances, namely those of the excretory organs, kidney, liver, intestines, must be investigated in every case before a second injection should be given.

NITROGEN AND SULPHUR METABOLIC RESEARCHES IN PSORIASIS. HANS GEBER, p. 377.

The metabolic observations in two psoriatics, lead Geber to the conclusion that the constancy of the nitrogen excretion is in close relationship to the sulphur excretion. In other words, that the variation in the sulphur excretion stands in a very close relationship to the increase or decrease in nitrogen intake.

CLINICAL AND ANIMAL EXPERIMENTS ON THE TOXICOLOGY OF SALVARSAN. FRANZ MIEDREICH, p. 393.

Experiments on patients showed that the disadvantages of using a weakly acid solution, with and without sodium chloride, outweighed the advantages. Likewise the omission of sodium chloride in alkaline solution proved to be a disadvantage in producing thrombosis and erosion of the vessel wall at the site of injection.

In conclusion Miedreich relates his experiments on rabbits; that weakly acid solutions produced more toxic reactions than alkaline and that these toxic reactions are the more so when sodium chloride is omitted.

DEUTSCHE MEDIZINISCHE WOCHENSCHRIFT.

(Oct. 30, 1913, xxxix, No. 44.)

Abstracted by CLARENCE ALLEN BAER, M.D.

ÆTIOLOGY OF VARIOLA AND VACCINES. E. PASCHEN, p. 2132.

The author has demonstrated bodies in the serum and pus taken from variola lesions. These bodies are small, round, sharply defined bodies like cocci. They

are often in pairs, connected by a filament. The two little bodies dance around each other. The bodies are often surrounded by a capsule. They pass through a Berkefeld filter, stain with difficulty and are easily decolorized. The bodies are under one-half micron in size. The organisms are intracellular and are found in the epithelial cells. Some cells show vacuoles containing a few bodies while others are packed full of the bodies. The bodies are resistant—they are not soluble in 2 per cent. potassium hydrate, 2 per cent. acetic acid, chloroform, ether, alcohol and are agglutinated by a specific serum. Paschen claims these bodies as the cause of variola because of the constancy of their presence, their large numbers in the lesions and their absence in other skin pustules. The organism has not been cultivated.

LIBERATION, ISOLATION AND CONCENTRATION OF PURE VACCINE VIRUS MADE BY MECHANICAL MEANS FROM ANIMAL SOURCES. GUSTAV PAUL, p. 2136.

The author explains in detail his method of producing vaccine against variola.

(*Ibidem*, Nov. 6, 1913, xxxix, No. 45.)

MEDICAL COSMETICS OF THE SKIN. KROMAYER, p. 2178.

This article is the third of a series of articles on Cosmetics of the Skin. Pigmentations, verrucæ, nævi, scars, keloids are considered in this installment.

THE EARLY STAGE OF ALOPECIA ATROPHICANS (PSEUDOPÉLADE BROCC). DREUW, p. 2181.

The author draws conclusions from 200 cases seen among Berlin school children. The disease might appear on the entire scalp—front, back or sides. Small areas might be involved, although often an area 3 to 4 centimetres long may be seen. The areas are round, square or pentagonal. The affected areas are not so sharply circumscribed as in alopecia areata. They may be covered with stumps of hairs or be entirely bald. There are no evidences of inflammation about the hairs. An epilated hair shows, near the root, a white sheath that ends abruptly near the tip of the hair. The disease occurs between the ages of 5 to 14 and is confined to boys. It occurs in isolated spots and never involves the entire scalp; microscopically and bacteriologically, no organisms could be demonstrated. These early signs are usually entirely overlooked. The disease occurs in epidemics.

The author recommends some therapeutic measures including arsenic, high frequency and ointments.

(*Ibidem*, Nov. 13, 1913, xxxix, No. 46.)

MEDICAL COSMETICS OF THE SKIN. KROMAYER, p. 2233.

This is the fourth article of a series on medical cosmetics. The following diseases are considered: alopecia, abnormalities of the hair shafts, hypertrichosis.

ABORTIVE TREATMENT OF SYPHILIS. WILHELM SIER, p. 2247.

The chancre should be excised or, if that be impossible, burned with a Paquelin cautery. Twice weekly, injections of 0.05 gram of a 10% mercury salicylate, for 20 injections. Neosalvarsan in doses of 0.6, 0.75 and 0.9 were given to the males and 0.45 and 0.6 to the females. The weaker neosalvarsan injections were used first, preceded by two mercury salicylate injections. At first, three neosalvarsans were given in 8 to 10 days, but later, two injections and a fourth after the twentieth salicylate injection. Of 34 patients in the chancre stage of syphilis, some

with negative and some with positive Wassermann reactions, 27 remain clinically and serologically well—5 after 1½ years, 4 after 1¼ years, 5 after 1 year, 2 after 9 months, 7 after 6 months, 1 after 4 months, while 3 have been less than 4 months. Of the 7 patients in whom the abortive treatment was not successful, 3 showed clinical signs of syphilis, while 4 manifested only a positive Wassermann reaction.

In conclusion, the author states that in every case of primary syphilis, if the Wassermann reaction be negative or positive, a combined use of salvarsan and mercury should be instituted, immediately accompanied by excision or radical destruction of the chancre. The treatment must be continued until the clinical symptoms disappear, and the Wassermann reaction becomes negative.

(*Ibidem*, Nov. 20, 1913, xxxix, No. 47.)

INTRAVENOUS TREATMENT OF LUPUS VULGARIS WITH GOLD-POTASSIUM-CYANATE. V. POOR, p. 2303.

The author tried this form of treatment as recommended by Bruck and Glück in 12 cases of lupus vulgaris, and concludes that the intravenous injection of Merck's gold-potassium-cyanate has a marked beneficial effect on lupus vulgaris. The lesions heal rapidly. Twelve to 14 injections of 0.01 to 0.05 grams are not sufficient to produce cure, even in small lesions. After 12 injections, a pause of 2 to 3 weeks was made, and 12 further injections were given, with a more pronounced improvement in the lesions than had been possible by any other means.

PERMANENT EPILATION BY ROENTGEN RAYS WITHOUT INJURY TO THE SKIN. DEMETRIUS CHILADITI, p. 2304.

The author advises epilation of the hairs with forceps, to be followed in two to five days by X-rays of 8 to 12 Holzknicht units at one sitting, through 4 millimetres of aluminum. The epilation with forceps increases the susceptibility of the hair papillæ to the rays.

(*Ibidem*, Dec. 4, 1913, xxxix, No. 49.)

RAPID HEALING OF EXCORIATED BREAST WARTS. NEUBAUER, p. 2410.

Neubauer uses a new preparation—a 10 per cent. Enguform ointment—with excellent results. Enguform is a condensation product of guaiacol and formaldehyde.

NEW INSTRUMENTS FOR LUMBAR VENAL PUNCTURE. KLEMENS BERGL, p. 2410.

SKIN DISEASES CAUSED BY HAIR AND FUR DYES. A. BLASCHKO, p. 2406.

Blaschko draws attention to acute eruptions on the head and face caused by dyes. Full descriptions are given.

The following substances are forbidden by German law from being used in dyes, unless labeled "Poison": lead, silver, copper, bismuth, and iron salts. "Juvenol" and "Koorpa," two proprietary hair dyes, are to be avoided because they contain paraphenyldiamin. "Ursol" is a paraphenyldiamin preparation used in dyeing furs. Such dyed furs are dangerous until all removable color has been washed out.

EARLY DIAGNOSIS OF TABES. A. AUSTREGESILLO, p. 2396.

The author considers the various symptoms of tabes and concludes that tabes is as frequent in Brazil as in other countries, that race and climate have no influence on the frequency of the disease; that cases showing all the symptoms of

tabes are not uncommon; that tabes with only one symptom does not exist; that tabes is syphilitic in origin; that early diagnosis is necessary in order to influence the course of the disease by combined salvarsan and mercury treatment; that physical treatment is of great importance.

ANNALS OF OPHTHALMOLOGY.

(Oct., 1913, Vol. xxii, No. 4.)

Abstracted by CLARENCE ALLEN BAER, M.D.

INTERSTITIAL KERATITIS OF LUETIC ORIGIN. GEORGE S. DERBY and CLIFFORD B. WALKER, p. 618.

This disease is of moderate frequency—one case in every 200 at the Massachusetts Charitable Eye and Ear Infirmary. There are two divergent views as to the nature of interstitial keratitis; one is that the disease is due to the direct action of the *spirochætæ pallidæ*; while the other holds it is an indirect manifestation of syphilis. Elsching claims that interstitial keratitis is a degenerative disease and follows a disturbance in nutrition, due to a change in the fluids that nourish the cornea. It is possible, also, that interstitial keratitis is an anaphylactic phenomenon. The usual antisyphilitic treatment has little effect on this disease. The authors have made repeated injections of salvarsanized blood serum subconjunctivally, without any beneficial results.

A social service worker who investigates the home surroundings and takes care of the patient as a ward for months, is a valuable adjunct to treatment, for much can be accomplished by a combination of antisyphilitic treatment with improvement of the patient's general condition.

MONATSSCHRIFT FÜR KINDERHEILKUNDE.

(1913, xii, No. 5.)

Abstracted by HARVEY PARKER TOWLE, M.D.

A CLINICAL VIEW OF SURGICAL SCARLET FEVER. HANS HAHN, p. 233.

Although the existence of surgical scarlet fever has been known for many years, no one has ever taken the trouble to define its clinical difference from the ordinary form of the disease. In this article, Hahn presents an analysis of 17 cases to prove that it actually possesses a clinical picture of its own.

The conditions which admittedly favor the development of surgical scarlet fever are burns and wounds. Hahn is convinced that the surgical treatment of empyema is an additional contributing factor. His reason is that, although children presenting many other surgical wounds were subjected to the same chances of contagion, surgical scarlet fever developed only in such children as had been operated on for empyema. In contrast to the usual type of scarlet fever, in which it is not possible to prophesy the course of the disease, the symptoms of the variant form always present a uniform picture of development and evolution. Moreover, its prognosis is always good. Hahn finds a suggestion as to the possible nature of surgical scarlet fever in the curious fact that, although all the patients were removed to a ward overcrowded with true cases of scarlet fever, but one showed susceptibility to fresh contagion.

The first symptom of the surgical disease is an abrupt rise of temperature, which is frequently accompanied by a pronounced chill. Apparently, the eleva-

tion of the temperature has no relation to the intensity of the manifestations in the skin, as in some cases the eruption was so indefinite that the sudden rise of temperature could not be at once interpreted. Vomiting is characteristically absent.

In most instances, the primary cutaneous manifestations appeared in the immediate vicinity of the surgical wound. The following clinical notes are characteristic: "In the afternoon, thoracic wound gaping, the skin round about markedly reddened, in part macerated; secretion abundant; on the same evening or next morning, fine macular eruption, at first over the upper portions of the trunk, later spreading over the whole body." The first signs of exfoliation usually appear in the neighborhood of the wound. The mucous membranes of the cheeks and gums are reddened and uplifted. The tongue is coated. The blood-red injection of scarlet fever is lacking. The tonsils are not swollen. There are no lacunar deposits. The regional lymph-glands at the angles of the jaws show little or no enlargement and are not tender. As a rule, the ears are not involved. Complications and sequelæ almost never occur.

The cause of surgical scarlet fever is doubtful. The most acceptable theory is that it is an infection of susceptible individuals by a greatly attenuated virus, which invades the system by some other gateway than the tonsils and which produces a mild form of scarlet fever.

(*Ibidem*, 1913, xii, No. 7.)

A CASE OF MULTIPLE TUMORS OF THE SKIN. EMIL SCHMID, p. 442.

In a case of multiple tumors of the skin occurring in a child eleven and one-half years old, Schmid was unable to make a positive clinical diagnosis but believed that the most probable was Boeck's sarcoid. The tumors were scattered in sparse numbers over the buttocks, breast, abdomen and back. There were a few on the extremities and on the face. In size, the tumors varied from a mustard seed to a five pfennig piece. All stages in the evolution of the process were represented. Histologically, the tumors consisted of a sharply defined, spindle cell, new growth in the upper layer of the cutis. The general health was not affected.

THE VALUE OF THE WASSERMANN REACTION IN THE SELECTION OF A WET NURSE. F. WESENER, p. 446.

The importance of detecting the existence of syphilis has grown in proportion as the use of human milk in the treatment of wasting diseases of childhood has increased. As the Wassermann reaction is the chief source of our evidence, it is, in equal degree, also increasingly desirable that we should be able to estimate its results with accuracy.

Dr. Wesener recognizes three possibilities which may follow diagnostic failure: the syphilitic nurse may infect the healthy child; the nurse may develop syphilis after her selection and later infect the child; or the healthy nurse may be infected by a child with unsuspected syphilis. In the absence of visible signs, the serum test becomes our sole means of diagnosis. As, however, the Wassermann reaction, according to Dr. Wesener, is not absolutely reliable, safety requires extraordinary precautions to prevent accidents. These are easy to take when the wet nurse is the inmate of an institution, but when she is not, are sometimes impossible.

Dr. Wesener studies both the mother and child, weighing carefully the data furnished by the history, the clinical examination and the serum tests. No mother is accepted as a wet nurse if a single doubt exists, nor if her child is under four months old. If deemed desirable, in case of doubt, the father of the child is summoned and is also subjected to examination.

A positive Wassermann test, even if unconfirmed, is considered sufficient cause for rejection. When, however, the test is only weakly positive and no other symptoms exist, the child may not be put to the breast of the wet nurse but may, if

the occasion demands, be fed with her milk, artificially withdrawn. Apparently, the syphilitic virus is not carried in the milk, as no cases of transmission have resulted from the practice.

Wesener believes that the evidence of an unsupported positive Wassermann test should be accepted with reserve. On the other hand, no attention should be paid to a negative test if there are other suspicious symptoms.

JAHRBUCH FÜR KINDERHEILKUNDE.

(Sept. 1, 1913, xxviii, No. 3.)

Abstracted by HARVEY PARKER TOWLE, M.D.

THE MEASUREMENT OF THE REACTION OF THE SKIN TO CHEMICAL STIMULI. J. H. SCHULTZ, p. 347.

In 1912, Schultz published experiments showing that the skin of children with exudative diatheses gave an exaggerated response to the irritation of certain chemicals. The ideal test, he says, should be harmless, easy to use, uniform in action and sensitive enough to distinguish the finer variations of the reaction. The present article relates that he found that ideal test in liquid carbolic acid, in concentrations varying from 1% to 100%. A quantitative measure of the skin reaction is afforded by the strength of the solution required to produce it.

THE SCAPHOID FORM OF SHOULDER-BLADE. BRUCKNER, p. 291.

As a result of his scrutiny of 41 children, Bruckner contradicts Graves' assertion that the "scaphoid" shoulder-blade is a valuable diagnostic sign of inherited syphilis.

THE PATHOGENESIS OF SCARLET FEVER. MARTIN KRETSCHMER, p. 278.

This article is written along nearly the same lines as Kretschmer's previous article, abstracted in the December, 1913, number of this JOURNAL (p. 961). The conclusions are: The causative agent of scarlatina has not been demonstrated. 2. The results of animal experimentation are not conclusive. 3. The streptococci play a very important part in scarlet fever but have been neither proved nor disproved to be the cause of the disease. 4. There is much to be said in favor of the view that susceptibility is an ætiological factor and that scarlet fever is an anaphylactic reaction to streptococcic infection. 6. Proper nourishment should be considered more carefully than heretofore in prophylaxis and treatment.

BIOCHEMICAL BULLETIN.

(July, 1913, ii, No. 8.)

Abstracted by HARVEY PARKER TOWLE, M.D.

PROCEEDINGS COLUMBIA BIOCHEMICAL ASSOCIATION.

(Reported by the Secretary in the Biochemical Bulletin.)

No. 88. METABOLISM STUDIES OF FIVE CASES OF ENDARTERITIS OBLITERANS ("HEBRAISCHE KRANKHEIT"). MAX KAHN, p. 545.

In five male adults suffering from endarteritis obliterans of the vessels of the leg and fed upon a Folin diet, the urinary nitrogen partition was normal. The excretion of ethereal sulphate and calcium was increased.

254 REVIEW OF DERMATOLOGY AND SYPHILIS

- No. 89. ON THE CONTENT IN EXPIRED AIR OF PROTEIN DETECTABLE BY THE ANAPHYLACTIC REACTION. DANIEL R. LUCAS, p. 545.

Interesting to the physician in reversed direction, because of the present theory of the production of the anaphylactic condition by a circulatory protein, elaborated by the toxic agent of the disease.

- No. 103. A STUDY OF THE INFLUENCE OF EXTERNAL HÆMORRHAGES ON THE PARTITION OF URINARY NITROGEN. OLIVE G. PATTERSON, p. 555.

Of some interest to dermatologists in connection with hæmorrhagic diseases of the skin. In dogs, each hæmorrhage caused an absolute increase in the total nitrogen and urea excreted by the kidneys. The creatinin output was increased at the first hæmorrhage but after subsequent bleedings was sometimes unaffected. There were no changes in the absolute amounts of ammonia, uric acid and urea.

- No. 104. THE ACTION OF A HIGH FREQUENCY CURRENT ON THE ACTIVITY OF PANCREATIC AMYLASE. P. W. PUNNETT, p. 555.

A high frequency current, such as is used in electro-therapeutics, was employed in the experiment. The result was negative.

ARCHIVES OF PEDIATRICS.

(October, 1913, xxx, No. 10.)

Abstracted by HARVEY PARKER TOWLE, M.D.

- NOTE ON THE IMPORTANCE OF THE WASSERMANN REACTION FROM A PROGNOSTIC AS WELL AS A DIAGNOSTIC STAND-POINT. W. P. LUCAS, p. 747.

Dr. Lucas believes that the prognostic significance of the Wassermann reaction in hereditary syphilis should not be underestimated. The substance of his argument is that when the serum tests of both mother and child are positive, the outlook for the child is very much worse than if the reaction of one or the other is negative.

(*Ibidem*, November, 1913, xxx, No. 11.)

- PICRIC ACID AS AN AID IN THE TREATMENT OF VARIOUS SKIN LESIONS. HERBERT B. WILCOX, p. 854.

Picric acid was discovered by Hausmann in 1788 and demonstrated by Laurent in 1841 to be a phenol resulting from the addition of nitric acid to a solution of phenol crystals in sulphuric acid. Its solubility is in alcohol, 10:100; in ether, 20:100; in water, 1.2:100. It may be absorbed when in solution, but in ordinary practice, a sufficient amount to do permanent harm is unlikely. Ahrenfried is said to have demonstrated that a 1% solution of picric acid exerts against the *Bacillus pyocyaneus* and the *Staphylococcus aureus* a bactericidal power 50 times greater than a 1% solution of carbolic acid.

Dr. Wilcox, after a year's trial in a variety of skin affections, concludes that picric acid is a very helpful dermatological remedy. Among its claims to favor he notes prompt relief of itching, burning and pain; rapid antiseptis and cleaning up of infectious processes; coagulating, protective action preventing the maceration and increasing the resistance of the surrounding skin; and, finally, easy application in the form of salves or in aqueous or alcoholic solution by means of simple bathing or wet dressings.

The best results were obtained in cases of burns treated with wet picric acid dressings.

In the milder cases of intertrigo, painting on the picric acid solution and, in the severer cases, applying wet dressings gave results so uniformly rapid and gratifying that now his nurses count a bottle of the aqueous solution a necessary part of their regular equipment and its prompt application to every red or irritated infant buttock, a matter of routine. Acute infantile eczemas of the face were usually favorably and promptly influenced. The subacute and chronic forms of eczema responded less readily. The pain and swelling of erysipelas were controlled by picric acid but the progress of the disease was not checked. Dr. Wilcox prefers picric acid to all other remedies in herpes labialis. In impetigo, it was a failure. Other treatment was better. In psoriasis, it did not influence the process.

CORRESPONDENCE.

To the Editor:

In our article entitled "Diffuse and Disseminated Dermatolysis," which appeared in the February issue of *THE JOURNAL*, there was a regrettable error of omission to which we beg to call attention.

We stated in this report that a superficial survey of the literature failed to reveal any definite allusions to cases clinically resembling the one described by us. We learned subsequently, that a very excellent article was published by Dr. Charles J. White under the title of "Dermatolysis—an Undescribed Dissolution of the Skin," in *THE JOURNAL* for July, 1908.

FRED WISE.
E. J. SNYDER.

BOOK REVIEW.

BEITRAG ZUR KLINIK UND HISTOPATHOLOGIE DER GUTARTIGEN HAUTEPITHELIOME. Von Priv.-Doz. DR. WALTER FRIEBOES, Assistant an der Universitätsklinik für Hautkrankheiten. Mit 27 Abbildungen auf

10 Tafeln. *S. Karger*, Berlin, 1912.

This is a booklet of about 100 pages, dealing with the subject of benign epithelioma of the skin. As the author states in his introduction, he does not offer this little work as a review of the entire subject, but limits himself to the discussion of rare and clinically peculiar types of cases, in this class of dermatoses. During the last decade many divergent views regarding benign epithelioma have appeared in the literature. Cases of this kind have been diagnosed as sarcoma, endothelioma and carcinoma. While the diagnosis of sarcoma has been eliminated, there still exist great differences of opinions regarding the question of endothelioma and carcinoma. Frieboes briefly presents the views of various authors, on this much disputed question. Borst, in 1902, published his views on the origin of these tumors, which he considered to be endothelial. Krompecher, on the other hand, called them basal celled carcinoma. The great majority of authors believe in the epithelial nature of the tumors, and that they are peculiar forms of carcinoma.

A certain group of these cutaneous tumors is represented by a few reported cases. These comprise instances in which one, or usually a great many, tumors appear on the scalp. These tumors vary in size from a nut to a man's fist, may be reddish or brownish in color, are lobulated and may develop in the course of many years. Subjective symptoms are absent. The tumors may occur also on the face, trunk and limbs. These tumors are classed as endothelioma by some, epithelioma

by others. A review of 22 cases follows, the last being a patient under the care of the author. A very complete and highly interesting clinical and histological report of this case is here submitted. A second case under Frieboes' care is described in detail, together with a comprehensive study of a case reported by Spiegler.

Frieboes next discusses the various types of tumors under these headings: 1. Tumors belonging to the type of epithelioma adenoides cysticum. 2. Tumors identical with the cases of Spiegler, Mulert, etc. 3. Haslunds' case. 4. Juliusberg's case. 5. Classification of the tumors.

In the résumé, the author states: 1. The cases of endothelioma of the scalp and trunk, described in the literature, are, with few exceptions, instances of benign epitheliomata. 2. These occur chiefly on the scalp and face, but may be scattered over the body also. Usually they are very numerous, only rarely do they appear as isolated tumors. They originate from small, nævus-like papules, developing, after the lapse of many years, into tomato-like tumors, as large as a man's fist. They may be rose-colored, wine-red, yellowish-red and usually show superficial telangiectases. 3. In my first case, besides the tumors on the scalp and body, three well-differentiated types of benign epithelioma could be demonstrated. These were epithelioma adenoides cysticum; a tumor having the structure of Krompecher's so-called "lace-fabric" superficial epithelial carcinoma; and the chondromyxomatous mixed tumor of the parotid. 4. While the tumors of the type of epithelioma adenoides cysticum seem to originate from embryonal elements derived from the epithelium of the epidermis, the hair follicles and the sebaceous glands, it is probable that the multiple endotheliomata of the scalp are developed from the embryonal elements of the sweat glands.

5. The tumors of my second case are also benign epitheliomata. They are identical with cases described as multiple endothelioma of the scalp.

6. Juliusberg's case of a single tumor of the abdomen is a benign epithelioma, not a lymphangio-endothelioma.

Haslund's case, which terminated in death, was one of malignant, infiltrating carcinoma.

8. Ancell's case may be identical with Spiegler's, but it also ran a malignant course, resulting in metastases and death.

9. In Spiegler's third case, the tumor-cell areas were connected with the epithelium, and hyaline masses were seen in the tumor alveoli and cell strands.

10. The tumors of the type epithelioma adenoides cysticum, together with the types described under headings 1 and 2, are classed under nævi and tumors originating from nævi; they are of embryonal origin, may appear in several generations, may show a familial tendency and are benign in character.

11. In the cyst-globules of epithelioma adenoides cysticum may be found cholesterin-fatty masses, besides the horny and hyaline material. When these cyst-globules disintegrate, xanthomatous cells are seen nearby.

12. As a group-name, E. Hoffmann's designation of adenoid nævo-epithelioma is the most appropriate.

The bibliography contains about 80 references to the literature.

The brochure is well illustrated with clinical photographs and histological drawings and microphotographs.

F. W.

NOTICE.

Owing to the large number of original communications awaiting publication it will be necessary to omit from THE JOURNAL all special features for a period of two or three months. The Abstract Department will appear in each issue, but Society Transactions, and installments of "Pathology" and "Therapeutics" will be discontinued until the May or June issue.

THE JOURNAL OF CUTANEOUS DISEASES

VOL. XXXII

APRIL, 1914

NO. 4

CASE FOR DIAGNOSIS: IMPETIGO OR IMPETIGO HERPETIFORMIS? *

By HARVEY PARKER TOWLE, M.D., Boston.

THE transformation of an apparently banal cutaneous disease into one of such severity as to cause the patient's death is so rare as to warrant a report. For that reason I venture to present the following case to the Association. I feel quite confident that no one who had seen its first eruption, would have disputed the diagnosis of impetigo contagiosa. On the other hand, any one who had never seen its impetiginous type nor its lesions showing the successive stages of its transition, but had seen only the malignant eruption which had finally resulted from the process of evolution, would have found preposterous the statement that the dominant eruption had ever resembled impetigo contagiosa. The use, in the title, of the names of two irreconcilable diseases is intended to indicate only that, in the present instance, just such irreconcilable types had been associated in the same patient. It is not intended to limit the discussion of the diagnosis to these two diseases but rather it is hoped that the respective groups which the diseases named in the title represent, will be included.

It is impossible to give a detailed account of the manifold symptoms and developments of the three months covered by the case. The following report, therefore, gives only an outline history, omitting details wherever possible.

CASE REPORT.

The patient was a woman, married, multipara, and somewhat over thirty years old. She had had apparent health previously but had always been more or less hysterical. She denied previous cutaneous disease although, since child-

* Read before the 37th Annual Meeting of the American Dermatological Association, Washington, D. C., May 6-8, 1913.

hood, her skin had been unusually sensitive. The patient was ambitious and proud; generally considered attractive in appearance and personality; and much impressed by the social value of cutaneous hygiene.

FAMILY HISTORY. The facts of the family history relevant to the present case may be summed up as follows: Every member of the family exhibited, in some form and in some degree, symptoms of psychical instability. Two of the family, both apparently in good health, had died from Bright's disease in early adult life. The coincidence impressed the others so much that they were fully convinced that they too would die from Bright's disease in early adult life.

PAST HISTORY. Certain facts in the past history require especial emphasis. The patient suffered a miscarriage and consequent operation in the December preceding the first appearance of the cutaneous disease. The first operation failing to give relief, a second became necessary, two months later. In view of the symptoms which the patient continued to present after the second operation and of others developed from them, there is a certain ætiological interest in the answer to the question as to whether the second operation had been more successful than the first, in removing the annoying uterine conditions. Unfortunately, no knowledge of these facts was received until a systematic examination of the uterus had become impossible. Judging from the clinical symptoms alone, it would seem that the disturbed uterine conditions had not only persisted after the second operation but had also given rise to very considerable secondary effects.

A second previous disease, also of possible ætiological importance, from which the patient had suffered, was a cystitis due to colon bacilli, carried into the bladder by a catheter. Knowledge of this infectious cystitis was never communicated by the patient but came from an outside source. As in the first instance, it was then too late to permit of an examination to determine the continued existence of the infectious process.

It was learned that the patient's general health had begun to decline with the appearance of the colon bacillus cystitis and had continued to grow poorer until, in a few weeks, it had sunk so low that recovery was questionable. About the first of June, there were signs of improvement. The gain continued, but so very slowly, that, in July, when the first cutaneous symptoms appeared, the patient was only barely able to be about for a few hours. The nervous tone had declined with the physical. Abnormal psychical manifestations were more frequent. It was indeed almost possible to measure the loss of nervous tone by the intensity of the pathological emotional states and the rapidity with which they changed from stormy rage to exhilaration or depression.

The date of the onset of the cutaneous disease and the region first attacked could never be determined definitely. Early in July, when the patient for the first time sought medical advice, the eruption already involved the scalp and nose. Its neglected appearance lent weight to the patient's one-time casual statement that the disease began on the scalp but had been successfully concealed until the eruption upon the nose, with its suggestion of greater spread, had frightened her into confession.

PRIMARY ERUPTION. The diagnosis of impetigo contagiosa was made at that date. Three weeks later, the same diagnosis of the eruption was made by a second physician, independently of the first. This fact and the unusual competence of both physicians establishes the character of the first eruption beyond dispute. As will be shown

directly, the cutaneous disease continued to present the characteristics of impetigo contagiosa for several weeks after this date.

GENERAL CONDITIONS, August 15. I first saw the patient on August 15, in the interval between her arrival in Boston on one train and departure for the country on another. The examination was necessarily hurried and incomplete. Upon entering the room, two things at once attracted attention. The patient seemed to wish to give the impression that she was greatly exhausted by the railway journey of one hour. The general aspect, however, indicated no such exhaustion and, upon physical examination, nothing could be found in the internal organs to account for the condition or to have partaken of the depression.

The patient was easily excited by insignificant causes. Each emotional crisis was accompanied by free sweating. The skin was apparently so tender everywhere, that the patient refused the slightest attention with an exclamation of pain and fear. Symptoms of grave hysteria abounded, especially a sense of fear so great as to compel recognition in every possible direction.

THE SKIN. The cutaneous reactions were hypersensitive. The skin everywhere gave an exaggerated response to every form of stimulation. The eruption was of uniform type and, even at this date, still typical of impetigo contagiosa. It now included in its distribution, in addition to the scalp and nose, the breasts, axillæ, umbilicus, lower abdominal region, the groins, the pudenda and the lumbar region of the back. Over these regions there were to be found, in varying abundance, thick yellowish crusts, both discrete and confluent, beneath which were superficial excoriations, bathed in serum and especially numerous and confluent over the groin, mons veneris, and the labiæ. Unfortunately, neither mouth nor hands were examined. It was remembered later that a casual glance at the hands gave the impression of a mild degree of hyperidrosis, but it is not possible to state definitely whether either mouth or hands were diseased at this time. If the patient had not already shown a disposition to refuse information, the lack of complaint would imply that they were not yet affected.

August 27. Nothing more was heard of the case until August 27, when the patient communicated with me by mail. It was reported that the impetiginous eruption was, on the whole, improved, notwithstanding the fact that two fresh lesions had appeared upon the scalp and two upon the breasts. On the other hand, the general health was going downhill and courage was disappearing. A new form of eruption had appeared upon the feet, two or three days

before, which differed from any hitherto seen. Groups of blisters had broken out upon the soles of the feet and the tops of the toes. This new eruption had increased the tenderness already existing, so that she could no longer walk because of the excruciating pain. To obtain relief she was obliged to go to bed. The pain then disappeared but was at once replaced by such intense itching that it was "difficult not to scratch the feet to pieces." Her gums, mouth and throat had also become so painful that she could no longer eat solid food.

From that date, September 1, until her death, September 24, I was with the patient constantly. Therefore, the following account of the developments during that period is based upon my personal observation. For convenience, the record has been divided into two parts. The first is devoted to a general description of the conditions as they existed on September 1. The second part relates to the progress of the case from September 1 to September 24.

CONDITIONS, September 1. It was at once apparent that a tremendous change had taken place. The physical prostration was apparently greater; the nervous symptoms were much more pronounced; and the cutaneous symptoms were more virulent and more widely distributed. The evidence indicated that the present conditions had developed from the eruption whose first appearance the patient had reported in her letter of August 27.

(1) PHYSICAL STATE. Nothing could be found by careful physical examination which indicated the presence of a systemic depression. The internal organs were normal. The circulatory conditions were normal. The urine showed none of the customary signs of renal irritation. The skin alone manifested the physical signs of disease. There was an entire absence of evidence suggesting a systemic intoxication. In view of such negative results the natural inference was that the cutaneous process could not be toxic and that, consequently, the symptoms of exhaustion must, in large part, be related to the pronounced hysterical conditions. In this connection, it may be stated that several different consultants, examining the case at various times later on, also could find nothing to explain the apparently extreme exhaustion and came to the same conclusions.

(2) MENTAL CONDITIONS. September 1st, the symptoms of nervous instability were nearly as prominent as the symptoms of the cutaneous disease. The sense of fear, previously noted, had now become an "idée fixe." A horror of death complicated every phase of the case and its treatment. We were able, later, to assign the cause, in part, to the suggestion conveyed by the deaths in the

family, and, in part, to suggestion from the stories, with which a lately departed nurse had entertained the patient, of the many fatal cases of similar diseases of the skin with which she was familiar. The patient insisted upon trying to forecast the probable effect for good or evil of every conceivable, and inconceivable, condition. At times she would neither eat nor sleep lest the act should work her harm. At other times, she would demand certain treatment and would then forbid the attempt to give it. Hardly a single measure could be accomplished without a conflict. The patient might fail to win the struggle. She never failed to exhibit signs of exhaustion at its conclusion. I may mention here that these conditions not only persisted but even grew worse with the lapse of time until, in mid-September, the bare suggestion of a proposed measure became a veritable nightmare.

(3) SUBJECTIVE SYMPTOMS. The chief subjective symptom was pain, which did not seem to be limited to any particular regions but to be present equally in the sound and in the visibly diseased skin. At times, the pain seemed to be less than the itching, whose occurrence, like the symptom of pain, seemed to bear no relation to the cutaneous eruption.

THE ERUPTION. Study of the multiform eruption showed that the earliest sign which the impetiginous lesion gave of the influence of the transitional process was the appearance of a narrow, slightly swollen zone of hyperæmic skin, from which the signs of exudate speedily disappeared as the limit of the hyperæmic area was approached. The successive stages of the transition could be traced without difficulty through an unbroken series of lesions which manifested progressively increasing degrees of inflammation and exudate. Coincidentally, the symptoms of impetigo decreased in proportion to the increase in the signs of transition. The evidences of the original disease grew fainter and fainter and, in the last stage, disappeared definitively, with certain exceptions to be mentioned later. Thereafter, although the signs of inflammation and of the production of exudate continued to increase steadily, the essential features of the newly developed disease underwent no further change. The process of the production of the lesions was fundamentally the same in all cases. The essential feature of the eruption in this stage of its evolution was a wide-spreading hyperæmia, with the signs of an intense exudate in the inner portions. Increasing gradually from the outer part, the exudate became so pronounced in the central portion of the lesion that its effect dominated the symptoms of the inflammation. The manifestations of the disease varied considerably in

intensity and in the extent of skin involved on different parts of the body. In general, the inflammation and the exudate were greatest, the extension of the process widest, and the appearances most modified in such regions as the folds and flexures of the body where trauma and the natural heat and moisture tended to increase the intensity of the process. The chief energy of the "disease of evolution" was notably manifested upon the epidermis and the upper layers of the corium; there was no tendency to ulceration.

APPEARANCES UPON VARIOUS PARTS OF THE BODY.

FACE AND SCALP. The eruption upon the face and scalp showed the signs of the acute inflammatory and exudative process in less degree than elsewhere. Consequently, the lesions still preserved many of the characteristic appearances of *impetigo contagiosa*.

MUCOUS MEMBRANES. The mucous membranes of the mouth and pharynx and of the inner surfaces of the labiæ and the vagina were extensively involved. The surfaces were greatly reddened and swollen and bore an abundant eruption of purulent vesicles, both ruptured and unruptured. The broken lesions left exceedingly tender, superficial excoriations behind, which were the source of much discomfort. The tongue was reddened beneath a thick, grayish coating and bore a few vesicles upon its surface. Upon its tip was a round erosion, covered by a thin gray membrane which suggested inoculation from a small, impetiginous lesion upon the vermilion border of the lower lip.

EXTREMITIES. The manifestations were similar upon both upper and lower extremities. The hands and feet, which are especially exposed to external influences, showed the greatest intensity and the adjacent parts, gradually decreasing symptoms. The most prominent symptoms upon the palmar and plantar surfaces of hands and feet were due to the tremendous outpouring of exudate. The fluid had detached the epidermal layer intact over the surface of the palms and soles and the adjacent portions of the phalanges and extremities. The epidermis on the palmar and plantar surfaces beyond and on the sides of the fingers and toes was œdematous and inflamed and bore many ruptured and unruptured vesicles with purulent contents. On the backs of the hands and feet, where the skin was less œdematous, redness was the more prominent symptom. The symptoms suggest the effects of a similar process to that in the mouth, but plus trauma.

SIDES OF THE TRUNK. On the sides of the trunk, the eruptive process was less affected by the external factors and was characterized by a comparative limitation of the lesions and a bullous form. For a short time, the appearance of the eruptive element was of a central,

oval bulla, about $\frac{1}{2}$ by $\frac{1}{4}$ inch, whose thin walls were tightly stretched by a sero-purulent fluid and seated upon a narrow inflammatory base. As the general intensity of the disease increased, the contents of the bulla became more purulent almost immediately, the inflammatory signs grew more pronounced and constantly enlarging areas were involved; the exudative process invaded the tissue immediately about the centrally located bulla, increasing as the inflammation advanced farther outward. The lesions showing the greatest tendency to spread developed small, fresh lesions in their peripheral zones.

FOLDS AND FLEXURES. In the groins, the axillæ, the flexures of the elbows and knees, beneath the breasts, the pudenda, the perineal and anal regions, the buttocks and the lower back, the various forms of trauma to which they are exposed, together with the natural heat and moisture, added to the intensity of the disease in varying degree and produced striking modifications in its symptoms. The severity of the inflammation, the greater outpouring of exudate under increased pressure and the extension of the process upon the surrounding parts reached their greatest height over these regions. The lesions, however, continued to manifest the same fundamental characteristics of the general process, only on a greatly enlarged scale.

The most prominent symptoms over the inner portions of the affected areas were still exudative. The abundant exudate and the moisture of the part so saturated the epidermal layer that it was unable to withstand either the increased pressure behind the exudate or the slightest trauma from without. Consequently, instead of the central bulla which was formed on the trunk, the central parts showed enormous areas of raw, red erosions, bathed in much purulent secretion, from which the protecting epidermal layer had been torn away. Beyond the denuded areas, the epidermal layer was still present but had been loosened from its attachments by the great pressure of the upward flowing secretion, so that its inner part was floating free. The outer portion was continuous with the inflammatory, fluid, infiltrated zone, described in connection with the bullous eruption. Beyond them all, lay a girdle in which the inflammatory symptoms predominated.

The spread of this reinforced process sometimes reached startling dimensions. Spreading from the groins, the process involved the skin above, nearly to the umbilicus and extended below, over the thighs and genitals. Laterally, its limits were marked by the hips on either side. On the back, from the mid-dorsum to the sacrum and from one side to the other, the pressure of the bed had torn away the saturated epidermis. Beneath the breasts, in the axillary regions

and in the flexures of the joints, the epidermal layer was missing wherever the parts had come in contact or had been rubbed.

PROGRESS OF THE DISEASE.

CUTANEOUS SYMPTOMS. After September 1st, the cutaneous manifestations continued to exhibit the symptoms of inflammation and exudate. The process continued to spread more and more while the regions which at that time were free, gradually developed signs of universal exudative process without, however, any marked symptoms of inflammation. The skin of the entire body soon became so soaked through, that it was impossible to grasp the patient anywhere without bringing away great sheets of soggy epidermis. The progress of the disease was interrupted in mid-September for a few days, during which the signs of improvement encouraged the hope that the tide had turned. The improvement did not last long however, but was soon followed by an abrupt return of active disease, working with a greater intensity and more rapidly.

The process spread simultaneously downward from the mucous membranes from the mouth and upward from the anus. Swallowing became almost impossible. Diarrhœa with hæmorrhage signified the involvement of the bowels. The patient passed into a state of low delirium, which was soon followed by stupor. Death came on September 24th, about three months after the first appearance of the cutaneous disease.

It is to be remarked that, except for the last few days, the predominating symptoms during the whole course of the disease, had been referable to the cutaneous and the nervous systems. The accompanying loss of strength lacked explanation. The digestive system had shown no symptoms of especial importance. The internal organs had remained unaffected so far as repeated examinations could determine. A prominent gynæcologist could discover nothing abnormal in the uterus. There was nothing in pulse or temperature or heart or kidneys, or indeed in any other organ, to prove that the cutaneous process had given rise to a systemic intoxication. The extreme hysteria and widespread cutaneous disease were the only demonstrable signs of disease. Whether the colon bacillus infection continued to exist must always remain a question.

It is an aphorism that fact outweighs theory. In the case herein reported there are two definite facts which cannot be ignored: the death of the patient and the transformation of the eruption. These necessarily limit the diagnosis to such affections as are fatal and are characterized by a multiform pustular eruption, bearing some

resemblance to impetigo contagiosa. On this basis, there are three diseases which must be given especial consideration: pemphigus vegetans, pemphigus foliaceus and impetigo herpetiformis. Whether all are forms of dermatitis herpetiformis and whether acrodermatitis pustulosa is merely a forerunner of impetigo herpetiformis, need not detain us, as the answer may be better included in the general discussion.

An essential factor to the diagnosis of pemphigus vegetans is the formation of vegetations. As our case failed to evince even a tendency in that direction, we may reject this diagnosis without further discussion.

Pemphigus foliaceus cannot be so easily disposed of. The bullous eruption of the final stage, the saturation and loosening of the epidermal layer by the exudate, the chief intensity of the eruption, the early involvement of the mouth, and the death of the patient, are not without their suggestion of this diagnosis. It would, nevertheless, be difficult to explain, under this conception, the primary eruption of impetigo contagiosa, the inflammatory origin of the later bullous lesions and the observed transition of the primary eruption. If it is argued that the early purulent eruption was due to secondary infection, we should still have to account for the purulent exudate of the later process, the absence of the systemic reaction which so severe a secondary infection ought to occasion, and the unusually rapid course.

The firmest foundation afforded the diagnosis of impetigo herpetiformis is still Hebra's original description of five cases published in 1872. Instead of clarifying and broadening Hebra's views, the various reporters have disagreed in their interpretation with such constancy, that these five cases raise doubt only of the stability of the diagnosis. Under such chaotic conditions, I have not attempted to construct a theory of impetigo herpetiformis from the literature, but have used Hebra's description as a basis of criticism.

The essential features of impetigo herpetiformis are, according to my interpretation of Hebra, a fatal disease in women, developing either during or immediately after pregnancy; the disease is characterized by a pustular eruption, especially abundant upon the flexor surfaces of the folds, which spreads by the development of fresh, miliary pustules in the periphery of the older lesions. The base of the pustules is always inflammatory. Death invariably follows, although it may be postponed until a later attack. The eruption comes out in crops. The mucous membranes are involved. Symptoms of vaso-motor disturbances are common upon regions not the

seat of the eruption. The lesions resemble *impetigo contagiosa* in appearance and *herpes iris* or *circinata* in arrangement. The ætiology of the eruption is absolutely unknown but was presumed to be, not pregnancy as such, but a finer disturbance of the uterine conditions.

It will be seen that the case before you presented many resemblances to Hebra's disease. Its most prominent disagreement was in the manner of its spread. Otherwise, it was not essentially different. Nevertheless, because the eruption fails in this respect, because the ætiology and, consequently, the limits of the disease are not known and because of the consequent weakness of the diagnostic foundation, *impetigo herpetiformis* must always be a negative choice, "faut de mieux." However great the suggestion, the diagnosis cannot be made, even tentatively, if a better known disease can offer an equally satisfactory explanation of the case.

Bearing in mind then, the necessarily tentative character of the diagnosis, we may sum up the chief factors in its favor. Disturbed uterine conditions associated with pregnancy are fairly represented in this case not only by the miscarriage but also by the two subsequent operations upon the uterus, with their additional surgical damage. Further, Hebra's disease is suggested by the anatomical seat of the eruption, the distribution, intensity and result. In these respects, this diagnosis agrees with the facts of the case better than any which has yet been considered. It remains, however, to examine the case in the light of the diagnosis of *impetigo contagiosa* before we consider the diagnosis settled.

Certain facts in the case demand an immediate answer. Can we reconcile death and a virulent cutaneous eruption to the diagnosis of *impetigo contagiosa*? The answer to the first depends upon whether it can be shown that, contrary to the usual idea, *impetigo contagiosa* ever causes death. The second part can be answered only by demonstrating an indisputable connection between the active cutaneous disease of the final stage, which resembled *impetigo contagiosa* so little, and the classic symptoms of that affection. In the event that both answers are favorable, it will then be necessary to show that the facts of the case support the possibility. Broadly speaking, the question must be as to the relative strength of the attack and the defence. Whatever weakens the force of one, relatively increases the strength of the other.

To prove that *impetigo contagiosa* does occasionally result in death, it is only necessary to refer to the literature. A few cases will be found which ended fatally. To be sure, such cases are not

numerous, yet suffice to prove that death sometimes does occur. Nevertheless, the result is so foreign to impetigo contagiosa that it must be due to extraordinary complications. Such were the circumstances in our case. Physical depression admittedly predisposes to increased virulence. In the present case it cannot be denied that powerful depressing factors existed. Whether they were of psychical or physical origin is immaterial. Their existence favored infection and their continuance, aided by the infection, eventually resulted in wiping out entirely the ability of the organism to defend itself. Naturally, death followed.

Concerning the final eruption, which differed so completely from the primary, it is only necessary to state that the latter was personally seen to change into the former to show that they were connected. Other observations confirm the fact. It was significant that the eruption presented continuous symptoms of impetigo contagiosa upon certain parts and modified appearances in like proportion, to the influence exerted by extraneous factors elsewhere. However altered the appearances might seem, essential characteristics of impetigo contagiosa were still preserved. Except in degree, the manifestations agreed with the accepted variations of the vulgar eruption of impetigo contagiosa. The greater intensity and wider extent were merely an accident due to external causes.

The hysterical condition was in no wise the result of the disease, as it was present years before. Its growth was but the natural result of the general lowering of tone, to whose increase it itself contributed.

Involvement of the mucous membranes is not very unusual in impetigo contagiosa. We have previously spoken of the impetiginous lesion on the lower lip and of the similar lesion upon the tongue, as well as of the suggestive appearance inside the cheeks. It is therefore not irrational to consider that the eruption upon the mucous membranes owed its origin to contagion and its spread and acquired intensity to the same factors which influenced the process elsewhere. Impetigo contagiosa therefore seems to offer a most satisfactory explanation of the multiform eruption. Though no reported case has ever shown all the symptoms of all the fatal, pustular diseases, so far as I have been able to learn in a fairly large collection of indeterminate cases, impetigo contagiosa has been the only disease invariably considered in their diagnosis. Furthermore, the reported cases show, on the one hand, that all are, in some characteristics, akin to impetigo contagiosa and, on the other hand, all are also related to each other. It follows that impetigo contagiosa is, at times,

connected with them all; it may, at times, present symptoms of them all.

Consequently, as the known is always to be preferred to the unknown, impetigo contagiosa would seem to be the logical diagnosis. It is the only disease whose ætiology and symptomatology is at all fixed. It is a common disease. The others are uncommon. Its symptoms are not inconsistent with those of the case under discussion. It is related to all the fatal, pustular diseases. It has been fatal in a number of cases. The concomitant circumstances in our case favored extraordinary virulence.

As the result of the observed transformation of this indisputable eruption of impetigo contagiosa into an affection so seriously suggesting each of these fatal, pustular diseases, it is inevitable that doubt should arise as to the advisability of separating the latter from impetigo contagiosa until their ætiology and symptomatology have been more definitely proved to be different.

A CONSIDERATION OF TWO OUTBREAKS OF SO-CALLED PEMPHIGUS NEONATORUM.*

By ANDREW PORTER BIDDLE, M.D., Detroit.

THE object of this short paper is to place on record two severe sporadic outbreaks of pemphigus neonatorum, which have occurred within recent time in my service in the Woman's Hospital and Infant's Home, a large private and public lying-in institution;—to compare the severity of these sudden outbreaks with a few other epidemics of a similar character;—to urge, as it has been done by almost every writer, that the name of pemphigus neonatorum to a disease which, in so far as we all seem to have observed it, is a pus cocci affection and bears but a gross clinical relationship to that type of diseases fulfilling the entities of a true pemphigus, and which name is confusing to all alike, be discarded;—and to support one more in accord with our modern-day conception of its pathology.

On October 15, 1912, my attention was drawn to the occurrence of bleb formations on the body of three babies, each less than a week old, in the private practice of different physicians. The dis-

* Read before the 37th Annual Meeting of the American Dermatological Association, Washington, D. C., May 6-8, 1913.

case was recognized as the so-called pemphigus neonatorum; the babies were isolated and placed under the care of special nurses; and the hospital temporarily closed to the parturient woman. Nevertheless, within twenty-four to forty-eight hours, nine other babies, widely separated in the hospital, three nurses on separate but affected cases and two nursing mothers of affected babies were down with the disease. No further mention of the outbreak as it relates to the nursing mothers and the nurses will be made, except to state that the lesions occurred on the exposed parts of the body of the nurses, such as the fingers, the ears and the face, and on the nipples and the buttocks of the nursing mothers. The eruption was mild, resembling the ordinary type of impetigo contagiosa and yielded in the usual course of time to treatment; but the lesions on the bodies of the babies were extensive, covering in some cases probably the entire surface, and were large, especially over the trunk and buttocks. The blebs formed and broke rapidly, at times within a few hours. In a few instances the temperature rose scarcely above the normal; but in others, especially with the Jenkins baby, the outbreak was accompanied with a high fever, lasting a fortnight or more, the constitutional symptoms were severe and the life of the babies despaired of. Fortunately in this epidemic no life was lost; all the babies recovered within three to four weeks; but in the outbreak of three years ago in the same institution, 30% died, the fatal cases succumbing, as usual, within a week to ten days. This is in accord with the experience of other reporters.

Hartzell reports a small epidemic in a maternity hospital of Philadelphia with a loss of 50%; Knowles, an epidemic of 30 cases, with 33% loss in a public institution in Philadelphia; Pusey, an epidemic in the maternity ward of one of the hospitals of Chicago with a mortality of 30%; Emma L. Call, an epidemic in the New England Hospital for Women and Children, of 19 infants and 3 mothers with a loss of only one infant and this probably not traceable to the disease (*American Journal of Obstetrics*, October, 1904). H. J. Schwartz, reporting on an epidemic in the Bulletin of the Lying-in Hospital of the City of New York for June, 1908, gives a death list of 25.9%. In this epidemic there were 27 cases (14 females and 13 males); 22 of these developed the disease from the fourth to the seventh day after birth. The postmortem examinations showed nothing special beyond slight congestion, especially of the digestive and respiratory tracts and the nervous system. Schwartz thinks "the cause of death may be looked upon as that which has been suggested in cases of burns, namely, as due to induced changes

in the red corpuscles or to the formation and absorption of toxic material from the local lesion."

Clinically, the lesions have resemblance to impetigo contagiosa. They differ from this disease in the rapidity with which they spread, their greater flaccidity, their lack of tendency to crust formation, the systemic infection which often accompanies them and the not infrequent loss of life which they cause. I have seen many severe cases of impetigo contagiosa in this and the service of other hospitals, but very few, if any, have been accompanied by a rise of temperature or by systemic infection. In these outbreaks, the duration in some instances have been shorter than with the ordinary impetigo contagiosa; but this, possibly, may have been due to the greater care given the patients.

The first lesion of the disease in the few cases seen in private practice has been found in the axilla, attributed to the carrying of the infection there by the nurse in the washing of the baby; but it may occur anywhere and is more frequently seen on the trunk.

Observation has associated the occurrence with midwifery and almost all epidemics have been found to have occurred in the service of the midwife or within institutional walls, especially the obstetrical wards, or in the Foundlings' Home. Its infective nature has long been recognized, though naturally its source cannot always be traced. What contributed to the outbreak of three years ago we were never able to determine, but the more recent epidemic was traced to a babe brought in by a physician in private practice, who had failed to recognize the serious nature of the eruption.

No specific organism has been found, but a culture from a bleb * under the arm in the baby "Daisy" case, taken October 17, 1912, gave the following:

From agar culture.—*Staphylococcus pyogenes aureus*.

From blood serum culture.—*Staphylococcus pyogenes aureus*.

From bouillon culture.—Some chains resembling streptococci and staphylococci.

In the baby "Jenkins" case, the severest of all, culture from a bleb on the head, taken October 20, 1912, gave *Staphylococcus pyogenes aureus* (pure culture).

In the experience of most observers, cultures from blisters have shown the *Staphylococcus pyogenes aureus*; cultures made from the blood of malignant cases the streptococcus. In Schwartz's bacterial findings, cultures made from the blebs both before and after death showed only the staphylococcus.

* Grace Whitney Hoff Research Laboratory.

From the foregoing, it will be seen that the *Staphylococcus pyogenes aureus* is an almost constant factor. Some observers, among them Sabouraud, Adamson and Sequeira, believe the *Staphylococcus pyogenes aureus* is, however, only a secondary factor, the true cause being the streptococcus; and Pernet believes with Pusey that the lesions may be produced by different kinds of pus organisms. Be this as it may, the intimate relation of the true pemphigus to the nervous system and the direct relation of the so-called pemphigus neonatorum to bacterial infection seems to be firmly established.

No attempt will be made to describe the clinical features of the various forms of pemphigus, but this group of diseases is essentially bullous, the walls of the bulla being usually oval or hemispherical, firm, and evenly distributed; but all diseases with bullous formations are not pemphigus, as witnessed in burns, and bullæ resulting from irritants to the skin, pus infectious processes of the skin, the so-called pemphigoid syphilide of congenital syphilis, the rarer forms of leprosy, urticaria and erythema multiforme. Unna, in speaking of pemphigus, writes that in defining the same he excludes "finally impetigo contagiosa, identified by some as pemphigus acutus neonatorum." Unna understands by pemphigus: "Only those bullous diseases in which watery, non-purulent vesicles appear in different parts of the body on unreddened or moderately reddened skin, in irregular order or in periodically occurring general outbreaks, but without the formation of characteristic groups or rings, are at most regionally distributed and symmetrical, and appear rapidly, with remarkably little subjective disturbance."

Pusey states in his introduction on pemphigus: "It will serve to clear the ground if we first carefully refer to certain conditions which are still sometimes denominated as pemphigus, but which have little or no connection with it."—Then he includes among these conditions pemphigus neonatorum, which he designates as a bullous form of impetigo, due to pustular infection of the skin.

That the name is still confusing, a glance at the literature even of the latest date gives ample evidence, though its true pathology is well recognized by all writers on dermatology. Yet even these, denying its relationship to pemphigus and considering the name ill advised, hesitate to discard it. In the 6th edition of his work, Osler, as do many other writers, confounds it with the bullous lesions of congenital syphilis, of which he writes: "When the disease (congenital syphilis) exists at birth, the child is feebly developed and wasted, and a skin eruption is usually present, commonly in the

form of bullæ about the wrists and ankles, and on the hands and feet (*pemphigus neonatorum*).”

Whether, as in the opinion of some, Ritter's disease (*dermatitis exfoliativa neonatorum*) is the same disease of a very severe grade; or whether the *dermatitis gangrænosum infantum* is allied to either; or whether *pemphigus acutus neonatorum*, a name given by some to the disease, can exist in the acute form (not the acute recurring attack of pemphigus) matters little in our attempt to place the disease under discussion in its proper category. It certainly is not of the pemphigus group and it is urged that the name given in the title be dropped from the nomenclature of American dermatology. Until a better name can be suggested, it should remain at *impetigo contagiosa bullosa* of the newborn,—the severity of its outbreak, its somewhat different clinical features and the often fatal outcome being attributed to the influence of a perhaps varying virulence of the infective agent upon the more delicate, less resistant skin of the infant, with the subsequent systemic infection.

The treatment is well established, being essentially that of *impetigo contagiosa* with enforced isolation, extreme care as to nursing, if it be a breast feeding baby, and proper methods to meet constitutional emergencies; but it may be of value to record that in these two epidemics the continuous application of the black wash was found to be of the greatest value.

A vaccine, made from the bleb taken from baby Jenkins on October 21st, but used on this case only, in a week's time gave rise to the most violent toxic reaction rash I have ever witnessed, a rash which covered its entire body.

DISCUSSION.

DR. WINFIELD said that, from the carefully reported case of Dr. Towle, together with some personal experience with cases that had a similar clinical aspect, he would be inclined to ascribe the cutaneous manifestations to a general colon bacillus infection. In two or three similar cases that had come under his observation, one of several months' duration, the symptoms were almost identical. The cutaneous eruption showed the same cyclic method of development, there was marked general depression and finally death.

The speaker said the case reported by Dr. Foster* was undoubtedly clinically pemphigus vegetans, and here again the colon bacillus may have been the ætiological factor, especially as the cutaneous manifestations came on after confinement. Similar cases were recorded in the literature, where the eruption came on after confinement.

DR. POLLITZER asked Dr. Winfield on what his diagnosis of general colon bacillus infection was based?

DR. WINFIELD replied that, in the case he mentioned, the diagnosis was con-

* Dr. Foster's case of pemphigus was published in the March issue, p. 231.

firmed by serological tests. The colon bacillus⁴ was recovered from the blood, and after death from various organs in the body.

DR. CORTLETT said it seemed to him that we had in pemphigus foliaceus, pemphigus vegetans, pemphigus neonatorum and impetigo, allied conditions. Clinically, they might be different, but ætiologically they were related. In the city of Cleveland they had had, during the past thirty years, an unusually large number of cases of pemphigus foliaceus, although the term in some of these cases he thought was misleading. The case which he showed at the meeting of this Association in Cleveland was one of these. The exfoliation or pie-crust formation in that case was not pronounced, but the excoriated areas were typical of this class of cases, of which they had had about twelve. During the past twenty years, they had had two epidemics of pemphigus neonatorum, in which the clinical symptoms were much the same as in the adult cases of pemphigus foliaceus, but the fatal issue was much more rapid. Of the cases of pemphigus foliaceus, all but two were fatal, death occurring in the course of from three to four months. He regarded Dr. Towle's case as belonging to this category.

DR. PUSEY said it seemed to him that we had in a case like the one reported by Dr. Towle a condition which was essentially a septicæmia accompanied by symptoms of pemphigus, and from his experience with acute pemphigus he was inclined to believe that it might be due to either a local or an internal infection. His attention was called to this view of the subject from seeing one case of acute pemphigus in a sheep butcher, similar to the cases described by Pernet many years ago. Several years ago, a patient was admitted into his service at the County Hospital with a cutaneous affection exactly like that described by Pernet. The original lesion occurred on the hand, and in the course of three or four weeks, there was a violent outbreak of acute pemphigus, with serious general depression, soon followed by death. The sequence of events in that case seemed very clear. Since then he had had a second similar case, which did not end fatally; the character of the disease was recognized and the patient was given vigorous antiseptic treatment from the outset.

The speaker said he attached very little importance to the physical element in the case reported by Dr. Towle excepting as a manifestation of depression due probably to the infection.

DR. KING-SMITH said that, in support of Dr. Pusey's view, he wished to recite the case of a gravedigger who, after disinterring a body from the wet ground in a broken casket, rubbed his forehead with his hand. A lesion developed on the forehead, which refused to heal, and subsequently bullæ appeared. The case was pronounced one of septic pemphigus, and Dr. Ormsby, of Chicago, who was passing through Toronto at the time, saw the case and agreed in the diagnosis.

The speaker recalled another case, one of pemphigus vegetans, where the patient had recurrent attacks and lost about 40 pounds in weight during each attack. He was sent abroad, and the lesions entirely disappeared, only to reappear when he returned to Canada.

DR. HARTZELL said that, in Dr. Towle's case, the location of lesions on the buccal mucous membrane and in the groins were suggestive of pemphigus. The speaker said he had observed the general depression that accompanied the appearance of these bullous eruptions, but had no explanation to offer for it.

The speaker said he wished to take issue with the statement that pemphigus neonatorum should be grouped with other forms of pemphigus. He regarded the former as nothing but a form of impetigo contagiosa, occurring in a young subject with succulent skin.

DR. SCHAMBERG inquired if any member had seen any report of the alleged discovery of a hæmatozoon occurring in pemphigus either by Professor Sternberg, of Brun, or commented upon by him in a communication read before a Medical Society in Vienna. The speaker said he had had a case of pemphigus

under his care, and together with Dr. J. A. Kolmer had made numerous blood examinations and found bodies of remarkable appearance in and around the erythrocytes, which, they afterward came to the conclusion, were blood platelets. These were greatly increased in this patient. Stained with the Giemsa stain, the platelets look not unlike hæmatozoa.

Dr. HAASE suggested that, in the study of these various types of pemphigus, laboratory studies were too often neglected in trying to solve the cause of the cutaneous manifestations.

Dr. FORDYCE said it was well to bear in mind that we might have a fatal termination in severe forms of pyogenic dermatitis. He had seen such a result in an inmate of the City Hospital about two years ago. This patient was a lodging-house inmate who died from septicæmia, following extensive ecthymatous lesions of the skin. At the autopsy pyæmic infarcts were found in the liver and kidneys.

We also encountered a group of cases where the skin and mucous membrane were involved with lesions which belong to the erythema multiforme group, especially that form known as erythema iris. The skin manifestations in the serious or fatal cases were accompanied with high temperature and evidence of severe constitutional disturbances. Dr. Pollitzer had reported such a case some years ago, and the speaker had also observed an analogous case with a fatal result.

Dr. HAZEN said that, in a recent case of pemphigus coming under his observation, the patient was of interest for several reasons. When he first saw her, about the middle of March, she had an apparent impetigo of the scalp, with middle-ear abscess. Ten days later she developed a few bullæ, chiefly about the breasts, abdomen and perineum. In connection with this, there was uncontrollable vomiting, and the patient gradually became weaker and died within ten days.

While this case was under observation it was carefully studied, and the colon bacillus was found in the urine. Fresh lesions could be induced by taking pus from one of the lesions and injecting it under the skin. Only the *Staphylococcus albus* was obtained from the skin lesions.

In another case of pemphigus, Dr. Hazen said, the blood cultures were at first negative, but the *Bacillus pyocyaneus* was found in the lesions, and in this case also the lesions were auto-inoculable. At death the *Bacillus pyocyaneus* was recovered from all of the viscera.

Dr. DYER asked Dr. Towle if any serum or vaccine was used during the period in which the case was regarded as one of impetigo. About three years ago, a case came under his observation which originally was regarded as a vesicular eczema, with scarcely any pustulation. The patient was under the care of a country physician, who gave three injections of anti-streptococcic serum. Less than a week after Dr. Dyer saw the patient, she developed a general septicæmic condition, with pemphigoid lesions, which became hæmorrhagic, and death occurred within a month. In that case, as in the one reported by Dr. Towle, there was a psychical element, and the urine contained a large amount of albumin.

Dr. TOWLE said that no vaccines nor serum were used in his case, and the hysterical condition was present long before the appearance of the skin lesions. The chief importance of the psychical element here was in masking the true symptoms, as there was doubtless a certain amount of hysterical exaggeration. The patient's temperature was so slightly elevated that it seemed out of proportion to the toxic condition; it was rarely above 100.5° F.

This case, as well as others that had been referred to in the discussion, simply emphasized the confusion that still surrounded these pustular eruptions. Here we had an impetiginous eruption, and the question arose whether we were justified in assuming that pemphigus vegetans or foliaceus were not at times allied with impetigo contagiosa. The most logical explanation he had to offer was that it was a case of impetigo contagiosa of extraordinary virulence, occurring in a

woman with hysterical tendencies and suffering from great physical depression. Then, again, there was possibly a thymus element, to which the fact that she died very suddenly lent some probability.

The speaker said we might get an impetiginous eruption or a herpetiform eruption or a pemphigoid eruption from different kinds of organisms, depending on their virulence and according to the soil on which they grew. It again brought us face to face with the problem whether it was justifiable to make such a number of divisions, all of which were bound together in an indeterminate meshwork.

DR. FOSTER said he was interested in the suggestion made by Dr. Winfield that the colon bacillus had something to do with the eruption in the case he had reported. There was a large group of bullous eruptions about which we knew very little, nor had he been much enlightened by the discussion of these two cases.

ORIENTAL SORE IN THE AMERICAS, WITH REPORT OF A CASE.*

By ERNEST L. McEWEN, M.D., Chicago.

IT will be conceded that the discovery of a case of Oriental Sore in the North Central portion of the United States, (Chicago, Ill.) imported thereto from South America, is an experience which would arouse a keen interest in that disease, both in its general aspects and, more particularly, in its manifestations as an American product. Oriental Sore, known under a great many other names, of which Aleppo Boil is the oldest, is ordinarily thought of as an Old World disorder. Its existence in the Western Hemisphere, however, was recognized about eighteen years ago, the first cases being reported out of Brazil in 1895. More recently, other cases have been found in South America, in the Canal Zone and Mexico. The exploration and development of tropical America, which is now in progress, and which will be accelerated greatly by the opening of the Panama Canal, is certain to bring this disease to our notice with increasing frequency. Two years ago Darling¹ prophesied the finding of Oriental Sore in Central America, and Mexico and showed by a study of the latitudes and mean temperatures of the regions of its endemicity in the Old World, that the disease could probably exist in the Americas between latitudes 40°N. and 40°S., wherever the mean annual temperature is 17.6°C. (64°F.) or more, and never less than 6.3°C. (43°F.) in winter. The possibility that Oriental Sore

* Read before the 37th Annual Meeting of the American Dermatological Association, Washington, D. C., May 6-8, 1913.

¹ DARLING, S. T. Oriental Sore. *Jour. Cutan. Dis.*, 1911, xxix, pp. 617-627.

might gain a foothold in certain sections of our southern states is a consideration which should challenge the attention of American dermatologists.

The case which forms the basis of this paper is as follows:

Mr. W. O., 37 years old, was first seen in February, 1913, with an ulcerative condition of the left ear. The following history was secured: He spent the summer of 1912 on a scientific expedition in South America. Starting at Pacasmayo, Peru, on the Pacific coast, in May, he crossed the Andes in a northeasterly direction and, entering the great rubber district, ultimately reached the upper Amazon River, down which he passed to Nazareth, Peru (a small village on the Javary River, about 15 miles from Tabatinga, Brazil) arriving there about September 1st. On the trip and during a two weeks' stop at this place, he was severely bitten by insects—fleas, flies, ticks, mosquitos and similar pests being exceedingly numerous. Thence he journeyed 9 days by boat to Manaos, an important capitol city situated on the mid-waters of the Amazon, where he stopped a few days. Here he noticed that while most of his bites had disappeared, one, on the helix of the left ear, was persisting as a split-pea-sized, slightly scaling nodule. A month later this nodule had extended along the middle and lower portion of the helix to a length of 2 cm., and was producing a rather bulky crust-like scale. Treatment at this time consisted in applications of zinc ointment, ichthyol, and a solution of mercuric chloride. In November, after reaching the United States, a small nodule appeared on the lobule of the ear; the first lesion was now showing a shallow central ulceration. About December 1st, a treatment with CO₂ snow was given, and a Wassermann test was made with negative results. Subsequently the condition became gradually worse. When first seen by the writer, the clinical findings were as follows: The helix of the ear somewhat below the middle point, was occupied by a bulky crust which covered a superficial ulceration about 4 cm. long by 2 cm. wide, with irregular sloping margins, and a granulomatous floor, upon a non-indurated base; there were some signs of cicatrization in the centre. The non-ulcerating portions immediately adjacent were infiltrated, reddened and secreting, the redness and swelling extending in all directions from the ulcer; the tendency to crust formation diminished as the distance from the ulcer increased. The margin of the lobule was swollen, reddened and secreting, but without ulceration. Removal of the bulky yellow-brown crusts was followed rapidly by their reappearance. There was no glandular enlargement, and practically no subjective symptoms. The family history was negative. A von

Pirquet test showed what seemed to be a faintly positive reaction after 60 hours. A general examination was negative. As the condition was obviously of tropical origin, a canvass of possible diagnoses, all points considered, seemed to place Oriental Sore first on the list. Smears made from the secretions of the ulcer-floor were prepared with Wright's modification of Romanowsky's stain and examined by the writer, for Leishman bodies, the causative agent in that disorder. Results were negative as regards the organism sought for, but the frequent presence of an intracellular diplococcus, in appearance exactly like a gonococcus, was noted. Films were then submitted to Dr. Maximilian Herzog of Chicago, who, after careful search, was able to demonstrate Leishman bodies in small numbers. The writer was subsequently more successful; and, in this connection he wishes to express his indebtedness to Dr. Herzog for his assistance in the search for the organism, and for the pathological report which is herewith appended.

HISTOPATHOLOGY.

Pieces of excised tissue were at once fixed in Zenker's solution, subsequently embedded in paraffin; the sections were stained with hæmatoxylin and eosin, and eosin and alkaline methylene blue. Microscopic examination showed the general characters of an inflammatory granulation tissue.

The epithelial covering was partly missing, having been destroyed by ulcerative processes. Where present, it showed considerable thickening, and there could be seen within the epithelial tissue a number of small abscess cavities, which contained numerous neutrophile polynuclear leucocytes; eosinophilic cells were not seen. These small abscess cavities were very much like similar formations found in blastomycetic dermatitis, but blastomyces were not encountered.

The subepithelial tissue, of the type of an inflammatory granulation tissue, showed dilated vessels, containing numerous polynuclear leucocytes.

The perivascular areas contained a dense cellular infiltration, composed of lymphoid and epithelioid cells, polynuclear leucocytes and a considerable number of plasma cells; the latter were characterized by a generally square or oblong protoplasm, staining markedly with methylene blue. A few cells in the areas of cellular infiltration exhibited karyokinetic figures, others showed pyknosis and karyorrhexis; cells with protozoan inclusions could not be found in the sections.

Smears made from the ulcerative surfaces and stained by Wright's stain, by Gram's method, etc., showed a large number of neutrophile polynuclear leucocytes, some mononuclears, and some degenerated epithelial cells; further, numerous diplococci were seen, many of them distinctly biscuit-shaped, and a considerable number of them inside of the protoplasm of polynuclear leucocytes. These diplococci looked very much like gonococci, but were found to be Gram positive.

In a number of smears examined thoroughly, there were found about six mononuclear endothelial cells, a little larger than large lymphocytes, in the protoplasm of which were numerous purplish-staining bodies, variable in shape and size. These were all more or less elongated, with the long axis from two to four microns, and the short axis of about one-half this size. Their shape was, in general, oval, spindle-shaped, kidney-shaped, or like a cockle shell.

Culture tubes were inoculated from the ulcerative surface. Both agar and blood serum tubes developed a diplococcus apparently in pure culture. Cover-

glass preparations of these cultures showed cocci quite variable in size; some of them still showed a distinct biscuit-shaped arrangement. On the blood serum medium, some of the cocci developed to a comparatively large size, with a rather irregular outline. The cultures which developed aerobically have not been further examined.

As orientation is always a prerequisite to intelligent advancement, it shall be the purpose of this paper to review the American situation as regards Oriental Sore, rather than to discuss in detail the disease itself or the organism which produces it.

Oriental Sore or cutaneous Leishmaniosis in the Americas has been the subject, up to the present, of approximately a score of references in the literature. If the cases reported be considered with respect to their chronological and geographical distribution and to the microscopical finding, it will be seen that our knowledge of the condition is rapidly increasing, and that a broader view of the entire subject than has heretofore been accepted is being forced upon us.

In December, 1894, Juliano² announced before the Medical and Surgical Society of Bahia, Brazil, that certain skin lesions of doubtful diagnosis, which for several years had been studied by clinicians in that region, were identical with Oriental Sore. His article indicates contact with a large number of cases, and his descriptions strongly support the correctness of his assertions. About the same time Moriera³ stated that "Biskra button" was endemic in the province of Bahia and that he believed many of the cases were erroneously diagnosed Pian.

In 1909, fourteen years after the purely clinical report of Juliano, and six years after the discovery of the organism of Oriental Sore by Wright, the first reports based on microscopic findings appear, in three contributions by Lindenberg, Carini and Paranhos, and Nattan-Larrier, Touin and Heckenroth. Lindenberg⁴ reported the finding of Leishman bodies in a form of cutaneous ulceration known as "Bauru ulcer," prevalent among railroad workers in the region of the town Bauru, about 400 miles west of Rio de Janeiro. The ulcers were described as usually single but occasionally multiple,

² JULIANO. *Jour. des mal. cutan. et syph.*, October, 1895.

³ MORIERA. "Die Biskra bouton in Bahia." Ref. in *Monatshefte for practische Dermatologie*, 1896, xxii, p. 592. Original article in *Ann. da Soc. de Med. e Cirurg. da Bahia*, 1895, No. 1. Without having access to the original article, it is difficult to say whether Juliano or Moriera has priority in reporting Oriental Sore from South America. It is possible that both expressed their views at the same meeting, December 30, 1894.

⁴ LINDENBERG, A. L'Ulcers de Bauru ou le Bouton d'Orient au Bresil. *Bull. Soc. Path. Exot.*, 1909, ii, No. 5, p. 252.

well defined, deep, with a floor covered with vegetations, which sometimes become papillomatous and dry: the whole surrounded by a zone of infiltration and redness. It should be noted, in view of the later reports, that this description suggests blastomycosis: the finding of blastomyces by this investigator, however, is not recorded. Treatment for syphilis and frambæsia was without effect.

Carini and Paranhos⁵ confirmed the findings of Lindenberg and identified Bauru ulcer with Oriental Sore.

Nattan-Larrier, Touin and Heckenroth⁶ recorded the presence of Leishman organisms in a case of Pian-Bois, or forest yaws. The patient had been a resident of French Guiana for 9 years; the lesion began as a vesicle on the dorsum of the left wrist, becoming later an ulcer, with slightly elevated margins, the adjacent skin being red and œdematous. The organisms, which were not numerous, were found within the mononuclear, connective tissue and giant cells; they appeared also free, more especially in the central and deeper portions of the lesion. These writers definitely mention that clinically the lesion in their case was not like typical Oriental Sore.

In 1910 four contributions to the literature were made, by Darling, Herrick, Rao, and de Matta. Darling's⁷ case was in a negro working near the Canal Zone in Panama. Darling states elsewhere that in a systematic search following the discovery of this case three others were found.

Herrick's⁸ case was also from Panama. His patient had been a resident of the region for 24 years, and was first seen in January, 1909, with an ulceration on the right ear, and an extensive dermatitis of the body, brought on by constant exposure to wet. The ear lesion was said to be due to scratching and eventually came to occupy the entire helix. Later, five or six nodules developed on various portions of the body, which ulcerated in July, 1909, were excised and brought to healing in November. In February, 1910, ringworm developed on the chin, and nodules appeared on the left shoulder, forearm and ankle. Later all these lesions became ulcerated and in them Leishman bodies were demonstrated. Clinically the nodules

⁵ CARINI, A., and PARANHOS, U. Identification de "l'Ulceera de Bauru" avec le bouton d'Orient. *Bull. Soc. Path. Exot.*, 1909, ii, pp. 255-257.

⁶ NATTAN-LARRIER, L., TOUIN, et HECKENROTH, F. Sur un cas de Pian-Bois, de la Guyane. (Ulceera a Leishmania de la Guyane.) *Bull. Soc. Path. Exot.*, 1909, ii, p. 587.

⁷ DARLING, S. T. Autochthonous Oriental Sore in Panama. *Trans. Soc. Trop. Med. and Hyg.*, London, 1910, iv, pp. 60-63. The original was not accessible to the writer.

⁸ HERRICK. Proceedings of the Canal Zone Medical Association, Oct., 1910, to March, 1911, iii, Part 2; ref. in *Jour. Trop. Med. and Hyg.*, 1912, xv, p. 105.

and ulcerations looked like epithelioma and rodent ulcers, and were all believed to have resulted from scratching. No history of insect bites was given.

Rao⁹ and de Matta¹⁰ each report a case of cutaneous ulceration with Leishman-body findings from Manaus, Brazil. Rao's case developed in the city itself, whereas Matta's patient acquired his lesion while in the region of the upper waters of the Amazon. These cases are important as being the first from the Amazon flood plain; Matta's especially is significant as the forerunner of other cases subsequently observed from the great South American rubber district. In this connection, it may be noted that in a sanitary survey of the city of Manaus made by Thomas¹¹ during 1905-09, undertaken under the auspices of the Liverpool School of Tropical Medicine, no mention whatever is made of Oriental Sore, or, indeed, of any ulcerative skin disorder.

In 1911, observations were recorded by Splendore, Werner, Darling and Connor, Carini, and Flu. The results of their work are of greatest importance; for the first time Leishman bodies are found in mucous membrane lesions; and further, the evidence that Oriental Sore may be more than a local affection is materially increased. This year sees also the first account of the cutaneous disorder Espundia, which is found in the South America rubber districts, and which has since been shown to be a leishmaniasis.

Splendore,¹² in an extensive study of Brazilian "Buba" concludes that under that title, three distinct diseases have been grouped, namely, true frambæsia, blastomycosis and Leishmaniosis, the two latter producing lesions of the mucous membrane as well as of the skin. He states that Leishmaniosis is common in Brazil, especially in the southeastern portions; the lesions are commonly found on the exposed surfaces, and occur as superficial ulcers of varying size, covered with a brownish adherent crust, which quickly reforms when removed; he has observed cases with similar ulcers in the nasal and pharyngeal mucosa; in one of these, the lesions were confined to the nasal and buccal cavities (primary). He describes the mucous mem-

⁹ RAO, C. Leishmanosa ulcerosa no Amazonas. *Revista medica de Sao Paulo*, 1910, 15 Mai, No. 9. Ref. in *Bull. Pasteur Inst.*, 1910, viii, p. 686.

¹⁰ DE MATTA, A. Leishmania Tropica. *Revista medica de Sao Paulo*, 1910, 30 Nov. Quoted by Werner, *Arch. f. Schiffs-und Tropen-Hygiene*, 1911, xv, p. 551.

¹¹ THOMAS, H. WOLVERTON. The sanitary conditions and prevailing diseases in Manaus, North Brazil, 1905-9. *Annals of Tropical Medicine and Parasitology*. 1910-11, iv, p. 1.

¹² SPLENDORE, A. Buba Blastomycosa Leishmaniosi. *Arch. für Schiffs-und Tropen Hygiene*, 1911, xv, pp. 105-113.

brane lesions as beginning as small, slightly elevated nodules with a pseudo-vesicular look; later they become confluent, lose their epithelium and form granulomatous masses, which are slightly raised, irregularly furrowed, and covered with a thin yellowish-white secretion; subjective symptoms are absent. In old cases, considerable destruction may occur in the nasal cavity, and as the condition may last for years, the patient may eventually become cachectic and gravely ill. Organisms exactly like the *Leishmania tropica* of Oriental Sore are easily demonstrated in secretions of the mouth lesions. This is the first report in the literature (February, 1911) of Leishmaniosis involving the mucous membranes; the second record, Carini's case mentioned below, was published four months later, while a third, by Cardamatis and Melissides¹³ appeared in July, 1911.

Werner's¹⁴ case occurred in Rio de Janeiro in a merchant who had not left the city for a year preceding the appearance of the sore. The lesion began as a papule, like that produced by the bite of an insect, on the left wrist; a few weeks converted this into a reddened nodule covered with a slight crust, under which gradually developed a small circular ulcer with slightly elevated margin. The Wassermann test was negative. Extending up the forearm from the ulcer, was a row of vesicles with red margins, which on healing left pigmentations. Excision was followed by recurrence. Subsequently *Leishmania tropica* was demonstrated in the lesion. Later a row of lymphatics became palpable at the elbow and two enlarged glands appeared on the right side of the neck, from which material was taken by aspiration and found to contain Leishman bodies. This case brings up the question of Oriental Sore as a systemic infection: Were the neck glands infected from the wrist lesion through the circulation, or from some unnoticed skin lesion in the immediate territory supplied by lymphatics draining into these glands? Werner is inclined to the latter belief.

Darling and Connor's¹⁵ case is the third reported out of Panama. A native Colombian, who had lived in Panama over 20 years, developed upon the helix and lobule of the left ear two ulcerative

¹³ CARDAMATIS ET MELISSIDES. Deux cas de bouton d'Orient dont le premier très rare; antagonisme probable entre le bouton d'Orient et la Kala-azar. *Bull. Soc. Patholog. Exot.*, July 12, 1911, iv, pp. 454-458.

¹⁴ WERNER, H. Ueber Orient-beule aus Rio de Janeiro, mit ungewöhnlichen Beteiligung des Lymphgefäßsystems. *Arch. f. Schiffs- u. Tropen-Hygiene*, 1911, xv, pp. 581-585.

¹⁵ DARLING, S. T., and CONNOR, R. C. A case of Oriental Sore (Dermal Leishmaniosis) in a native Colombian. *Jour. Am. Med. Ass'n.*, 1911, lvi, pp. 1257-1258.

crust-covered lesions, in which Leishman bodies were demonstrated. The lesions were believed by the patient to have been caused by the bite of a fly, while working in the forest outside the Canal Zone. The photograph which accompanies Darling and Connor's article is strikingly similar to that of the case herewith reported.

In Carini's¹⁶ case, ulcers on the legs were followed in a year by the appearance of erosions, vegetations and granular masses on the palate, which gradually extended to the nasal cavities. The patient became much wasted; there was a cough with mucopurulent expectoration; pain was not marked. *Leishmania tropica* were found abundantly in the lesions. Carini believes the mucous membrane lesions are always inoculations from preceding skin infections.

Flu's contribution is a study of the "Bosch yaws" of Dutch Guiana (called "Pian-bois" and "Forest yaws" in French and British Guiana). Forest yaws and true yaws or frambœsia are not identical; the former gets its appellation from the fact that it is acquired in the forest and that the ulcers occasionally become papillomatous, crust-covered lesions. Flu examined six cases and gives the general characteristics of the condition as follows: The agent of infection is considered to be a tick, the lesions are upon the exposed parts and begin as small papules, which increase to the dimensions of small tumors and become covered with a shiny epidermis or with scales and crusts. Eventually breaking down occurs; the resulting circular or oval ulcers may reach a diameter of 5 cm., and have swollen, elevated margins, and a granulomatous, crust-covered floor. They are generally multiple, and small secondary ulcers near the margins of the larger ones are common. Pain is absent or slight; constitutional disturbances in the absence of secondary complications are not found. The course is chronic, but spontaneous cure may take place. Immunity after an attack is usual, but not invariable. He found in the scrapings from the margins of the ulcers, organisms, besides bacteria and spirochætes (*spirochæta refringens*?) which corresponded exactly to *Leishmania tropica*. They were for the most part within the large mononuclear cells. Flu considers that the Bosch yaws of the Guianas, and the Bauru ulcer of southeastern Brazil are probably identical.

There is found in the great rubber district of South America, comprising parts of Brazil, Bolivia, Peru, Ecuador and Colombia, a cutaneous disorder called Espundia. This term is not mentioned

¹⁶ CARINI, A. Leishmaniose de la muquese rhino-bucco-pharyngie. *Bull. Soc. Pathol. Exot.*, May, 1911, iv, pp. 289-291.

in the latest text books on dermatology or tropical diseases accessible to the writer, and apparently an article by Escomel,¹⁷ in 1911, is the first reference to the disease in the literature. Escomel describes it as follows: It is especially prevalent near the river Madre de Dios; there is a primary lesion, the "espundic chancre," which may appear on the neck, chest, back, shoulders, arms or legs, and consists of a variable-sized ulcer with raised edges and granulous floor. Healing eventually occurs with scar formation and after some years, ulcerations of a severe and persistent type appear in the nose, mouth, on the palate, pharynx and larynx; this condition may continue for years with grave interference with the victim's health; destruction of the bony structures within the nasal cavity may cause flattening of the nose; the furrows intersecting the masses of granulations within the mouth are very often so disposed as to form a cross in the region of the palate, and Escomal thinks this appearance is characteristic enough to be worthy of a name, "the palatine cross of Espundia."

In March, 1912, Laveran and Nattan-Larrier¹⁸ announced that they had found *Leishmania tropica* in the tissue removed from the mouth of a patient with Espundia of 15 years' standing, and also in the smears from an ulcer in the same patient. The organisms were not numerous in the mouth tissue, and were found mostly in the mononuclear and connective tissue cells. These observers noted an apparently constant peculiarity of structure in the organisms, namely, the usual rounded tropho-nucleus was replaced by a crescentic nuclear mass lying at the periphery of the organism. This suggested to them the possibility of a species differing from the usual.

Wenyon, whose extensive and valuable investigations on Oriental Sore in Bagdad¹⁹ render him especially qualified to speak, in a communication (*Jour. Trop. Med. and Hyg.*, July 1, 1912, xv, p. 193) regarding the findings of Laveran and Nattan-Larrier states that he had seen a similar arrangement of the tropho-nucleus in his Bagdad experience and adds the interesting fact that he found, in the case of cutaneous ulceration from South America, under his personal care, Leishman bodies, which differed in no way from those he had constantly seen in Bagdad. His report of this case (*Jour.*

¹⁷ ESCOMEL, Ed. La Espundia. *Bull. Soc. de Pathol. Exot.*, July, 1911, iv, pp. 489-492.

¹⁸ LAVERAN, A., and NATTAN-LARRIER. Contribution a l'etude de la Espundia. *Bull. Soc. Pathol. Exot.*, March, 1912, v, pp. 176-179.

¹⁹ WENYON, C. M. Report of six months' work of the Expedition to Bagdad on the subject of Oriental Sore. *Jour. Trop. Med. and Hyg.*, Apr. 1, 1911, xiv, pp. 103-109.

Lond. School Trop. Med., July, 1912. Reviewed in *Jour. Trop. Med. and Hyg.*, 1912, xv, p. 287) is one of extreme interest: An Englishman, traveling in Bolivia and Peru, passed from Lake Titicaca northward to the Tambopata River and thence to its junction with the Madre de Dios. Six months after entering the country, a sore appeared (location not stated); as he continued his journey down the Amazon and to England, this lesion increased in size, and a second one developed. Clinically, these two were identical with the lesions of Oriental Sore observed by Wenyon in Bagdad and other parts of Asiatic Turkey, except that they presented a greater local involvement of the lymphatic system. Leishman bodies were found in the lesions, cultures and subcultures were readily made, and inoculation experiments on dogs were successful. Wenyon states that if his patient's disorder was an example of Espundia, then the two sores must be regarded as espundic chancres, rather than late manifestations of a preceding espundic infection.

Reference thus far on Espundia are meagre, and tend to show that the nature of the disorder is not yet determined. Similarity between it and "Brazil Buba" and "Bauru Ulcer" was noted by Laveran and Nattan-Larrier (*loc. cit.*). Wolfbaum,²⁰ in a survey of the diseases of the Acre Territory which occupies the southern portion of the Brazilian and the northern portion of the Bolivian rubber district, gives the impression that the lesions of Espundia are not constant in type. He describes the ulcers as foul, crust-covered, with undermined edges; tending to spread peripherally and in depth; most commonly located on the leg, but also appearing elsewhere. He thinks it has a strong resemblance to tropical phagædenic ulcer. Although spirochætes were not found in the lesions, he believes the disease may represent a stage between syphilis and yaws.

Santamaria²¹ describes Espundia in Colombia as presenting pedunculated, pea-sized lesions which ulcerate and leave an erosion which is difficult to heal. The natives sometimes remove them by ligature. Leishman bodies are not mentioned either by Wolfbaum or Santamaria.

Cutaneous Leishmaniosis in Mexico is reported in 1912 by Seidelin.²² Working in Merida, the capitol of Yucatan, he had the

²⁰ Tropen Erfahrungen aus den Inneren Süd Americas. Beiheft z. *Arch. f. Schiffs- u. Tropen-Hygiene*, 1912, xvi, pp. 261-285.

²¹ SANTAMARIA, J. M. Some notes on Tropical Diseases observed in the Republic of Colombia. *Jour. Trop. Med. and Hyg.*, Apr. 1, 1913, xvi, p. 100.

²² SEIDELIN. Leishmaniosis and Babesiasis in Yucatan. *Ann. Trop. Med. and Parasit.*, July 31, 1912, vi, p. 295.

opportunity to examine a number of cases of ulceration on the ears of natives engaged in collecting the chicle used in the manufacture of chewing gum. The disorder is said to be very frequent among these workers throughout Yucatan. The ulceration is sometimes, though rarely, extensive enough to destroy the ear and invade the cheek. The duration is ordinarily from two to eight months, but may be two years. The natives believe that it is conveyed by the bite of an insect, either a mosquito or a black fly. Smears were examined from seven cases, and in all of them, organisms having all the appearances of *Leishmania tropica* were found, for the most part within the large mononuclear cells. In one instance, the smear was prepared from a non-ulcerating nodule. A point of great interest was the presence, in four cases, of a diplococcus having the exact appearance of a gonococcus, retaining the Gram stain, and lying free and within the polynuclear and large mononuclear leucocytes. In two of these cases a secondary infection was present; in the other two, it was the only associated organism, and one of these was the case with the non-ulcerating nodule, referred to above. Seidelin thinks the two organisms may be associated as ætiological factors.

Wenyon in his report on Oriental Sore in Bagdad (loc. cit.), was the first to note the association of a diplococcus with *Leishmania tropica*, and considered the fact important enough to mention as a special item in his summary. In the case herewith reported a diplococcus was frequently observed, along with pus bacteria of secondary infection.

The latest American report is that of Bates.²³ The patient was a native of Panama; the lesions were 3 years old and consisted of a rather extensive, crust-covered ulceration of the helix of the left ear, similar, but less extensive, lesions on the right ear, and the extensor surfaces of both elbows. The lower portion of the nose was much swollen and indurated; the margins of the alæ nasi were ulcerated and crust-covered; on the sternum was a large scar with the lower edge active and crusting; there was a marble-sized nodule on the shin. Smears from the ears and alæ nasi showed typical *Leishmania tropica*. The mucosa of the nasal septum was tender, bled easily, but was without ulceration; smears prepared from it, with special care to prevent contamination from the alæ nasi, showed many Leishman bodies. In one instance, a few were found within

²³ BATES, L. B. Leishmaniosis (Oriental Sore) of the Nasal Mucosa. *Jour. Am. Med. Assn.*, 1913, ix, p. 898.

an endothelial cell. Bates thinks this is a case of Leishmaniosis of the mucous membrane, without ulceration.

From the foregoing case report and review of literature certain important facts are evident; namely:

1. Oriental Sore is undoubtedly of frequent occurrence in South America.

2. A pure type of the disease is probably not common. The usual form seems to be a mixture of Oriental Sore and one or more different infections, as frambæsia, blastomycosis, syphilis and various forms of saprophitic and pyogenic bacteria.

3. Oriental Sore involving the mucous membranes has been reported (in one instance as a primary infection) and the clinical evidence seems to indicate that these reports will appear with increasing frequency from now on.²⁴

4. Evidence is accumulated which tends to show that Oriental Sore may be more than a merely local infection. This is especially suggested by the report of Splendore, the case of Werner, and the clinical accounts of the infection called Espundia.

5. The finding of a diplococcus of constant type, by three independent observers, in widely separated cases (and apparently without knowledge of each other's observations) is an occurrence so significant as to call for further investigation by those who have abundance of suitable material at their command.²⁵

Lastly, Oriental Sore has been reported a number of times out of Panama; it is known to be endemic in Mexico as far north as 21.5° N latitude; its direct importation into the United States has been recorded in this paper, and further importation is inevitable as the American tropics are penetrated more and more by the explorer and trader. That the future will find Oriental Sore endemic in certain portions of our country is highly probable, since the necessary requirements thereto are certain to be met, namely: the presence of the organism by importation, suitability of climatic environments, and a varied and abundant insect life, as an efficient agency for transmission from man to man.

²⁴ The destruction of the nasal tissues reported in some of these cases of Leishmaniosis of the mucous membranes suggests the possibility of Leishmania as an ætiological factor in the disease gangosa.

²⁵ Since the presentation of this paper, Dr. H. H. Hazen, of Washington, in a personal communication to the writer, states that he found similar diplococci in an ulcer on the arm of a boy from Yucatan. The ulcer appeared like that of Oriental Sore, but Leishman bodies were not found.

PLATE XXI.—To Illustrate Article on Oriental Sore in the Americas, with
Report of a Case, by ERNEST L. McEWEN, M.D.



Fig. 1.
Clinical appearance.

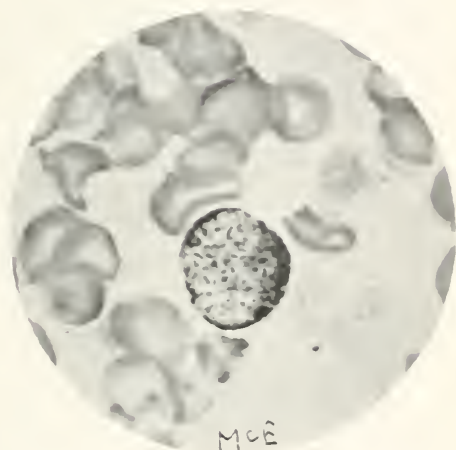


Fig. 2.
Showing cell inclusions.



Fig. 3.
Showing cell inclusions.

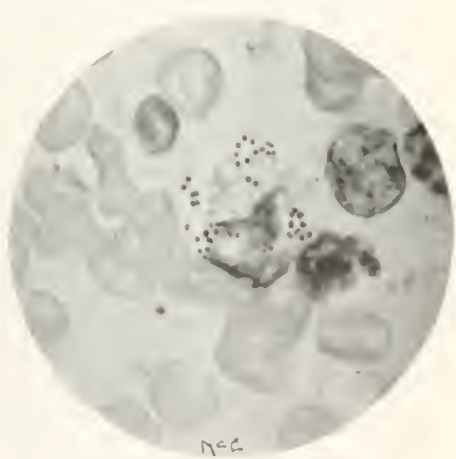


Fig. 4.
Showing diplococci.

DISCUSSION.

Dr. HOWARD FOX said that while he had no personal experience with Oriental sore, he had a little second-hand information on the subject which he had received from Dr. Walter B. Adams of Beirut, Syria. The latter had seen many such cases, and said that in Syria the name Aleppo button was applied to this lesion. Dr. Adams protested against the name boil being applied to it, as he said it did not look nor act like a boil, that it was practically painless and that there was no central core. In regard to treatment, while Dr. Adams had obtained some good results from the X-ray, he had more recently used carbon dioxide snow in some twenty cases and had found it very efficacious. After a single application of the snow, the lesion was often cured within ten days.

Dr. RAVOGLI said that in the clinic of Professor Pellizzari in Florence he saw a case of Boubas in an Italian laborer who had been working in Brazil. The initial sore had been located on the palate, and in the course of nearly twenty years it had destroyed the nose and larynx and infected the lymph glands in a horrible way. The speaker said he believed that Boubas was not to be considered as a form of Leishmaniasis, as maintained by Splendore, but as a disease caused by the spirochæta *pertenuis*. It had nothing to do with syphilis, being a disease *per se*.

Dr. Ravogli said there had been described as Oriental sores ulcers developing in the genito-crural fold. Some of these may be confounded with old tertiary syphilis, or to syphilis and tuberculosis together. When Leishman bodies can be constantly found in various kinds of sores, then we would be in a position to group them in a class by itself, as the result of that particular causal agent.

Dr. FORDYCE said that several years ago Dr. Menage, who was associated with Dr. Dyer, sent to him a man from Central America who had an ulcerated lesion on the external ear which clinically resembled the case described by Dr. McEwen. The patient stated to him that the condition was not infrequently met with in Central America and was attributed to insect bites.

Dr. C. J. WHITE said that a few years ago, at the Massachusetts General Hospital, an example of this disease was recognized in the skin department and the lesion was examined histologically by Dr. J. H. Wright, who demonstrated the presence of the Leishman bodies; but it was striking how different those bodies were from the ones shown by Dr. McEwen to-day. The Boston examples were crescent or falciform, while Dr. McEwen's were round.

Dr. White asked Dr. McEwen whether he had ever met with what was known as the Yucatan Bay sore? Last winter, the speaker said, a man came to him with a lesion on the eye which resembled an old syphilide. Nothing was found on microscopical examination but granulation tissue, and the Leishman stain revealed nothing. The lesion healed under potassium iodide. It was learned afterward that this disease was quite common in Yucatan, where it was known as the Yucatan Bay sore and was supposed to be caused by the bite of a fly.

Dr. McEWEN said that Splendore, whose article he had read in abstract form only, seemed to use the terms "Brazilian Buba" and "Frambæsia" interchangeably. As to the mode of infection, some claimed that the excreta of certain insects was a factor in transmitting the disease to man; that the Leishman bodies could live in the alimentary canal of these insects and that a skin abrasion might become infected from the discharges.

Dr. McEwen said he had not encountered in the literature the name "Yucatan Bay Sore" to which Dr. White had referred. The natives of Yucatan who collected the substance known as chicle, which was used in the manufacture of chewing gum, were often infected in their work, and cases were on record where the entire ear had been destroyed.

Seidelin, in his Yucatan article, reported that he found the Leishman bodies in a non-ulcerating lesion, which would seem to confirm the growing belief that

there is a non-ulcerating form of Oriental sore. He also found in this non-ulcerating lesion, and in another case, a diplococcus similar to the one which he (Dr. McEwen) had observed. A possible relationship between these organisms in the production of Oriental sore may yet be demonstrated.

Dr. McEwen said that in his case he used the carbon dioxide snow and the results were not as satisfactory as in the cases Dr. Fox had referred to. Still, his patient was improving rapidly, and his complete recovery was expected, even though treatment, on the whole, had not fulfilled expectations. The patient preferred not to have the X-ray used.

THE PATHOLOGY OF XANTHOMA TUBEROSUM MULTIPLEX.*

By FRANK CROZER KNOWLES, M.D., Philadelphia.

Clinical Professor of Dermatology, Womans' Medical College; Instructor in Dermatology, University of Pennsylvania; Dermatologist to the Presbyterian, the Children's and the Howard Hospitals; Assistant Dermatologist to the Philadelphia Hospital and the Dispensary of the Pennsylvania Hospital, Philadelphia.

ALTHOUGH Rayer, under the caption "plaques jaunâtres des paupières," was the first to describe a case of xanthoma, which was of the planum type, it remained for Addison and Gull, fifteen years later, in 1851, to record a case with the typical palpebral and nodular forms associated in the same individual. W. F. Smith, however, was the first to give the affection the title of xanthoma.

So numerous have been the case reports and papers upon xanthoma, that a resumé would prove too lengthy in the present paper and it will suffice therefore to call attention to the tabulation of Hutchinson, Sangster and Crocker of twenty-eight cases of the multiplex type in adults and of eight in which the disease was congenital or appeared before puberty; to mention the exhaustive analysis of Török, of forty cases of xanthoma multiplex in adults and thirty in children; and to emphasize the importance of the monograph written by Leven, giving a collection of twenty-three cases of this affection.

The writer will confine his efforts to the side of the disease, which is always of the most interest and value, the histology of xanthoma tuberosum multiplex. It will prove of importance to give a short review of the various views held by some of the investigators on the histopathology of xanthoma.

* Read before the 37th Annual Meeting of the American Dermatological Association, Washington, D. C., May 6-8, 1913.

Chambard believed that there were two processes going on—an increase of connective tissue and a fatty degeneration or deposition, the result of a chronic inflammatory process; in the soft plaques the fatty change, and in the nodules the connective tissue growth predominated, being greatest in the larger or firmer lesions. He also found a peri- and endarteritis and perineuritic thickening, but probably this was present only in the nodules in which the connective tissue increase was considerable.

Touton disputed these simultaneous progressive and retrogressive processes; he regarded xanthoma as non-inflammatory, and a veritable new growth, composed of elements which are not normally present in the corium. He thought they were mixed tumors, such as fibro-sarco-myxo- and cyst-adeno-xanthomas, and that there was cystic transformation of the confluent destroyed xanthoma cells.

L. Dore thinks that they are myelo-xanthomas, and that the cells of each have a common pathogenetic origin. Hebra, Geber and Simon have expressed the view that the growths are of sebaceous gland origin. Schwimmer found dilated lymph vessels.

Quite a number of investigators have written upon the resemblances and the differences between the different types of xanthoma—the planum, the tuberous and the diabetic forms—and it would be well to quote a few, in order to have a clear conception of the complicated histological picture of this affection.

Whitehouse and Johnston believe there is no kinship between xanthoma vulgare and xanthoma diabeticorum, save only in the presence of fat, due in both instances to a degenerative process; as the diabetic form it is inflammatory; in the neoplasm, it is inherent in certain types of endothelial new growth. They believe that the tumor is an endothelioma with a vessel derivation and an inveterate tendency to granulo-fatty degeneration.

Although the great majority of writers are of the opinion that xanthoma planum, xanthoma multiplex and xanthoma diabeticorum are different types of the same process, Török thinks the first two are related and the last form is a distinct affection; the diabetic form being unrelated to the others because it is an irritative process ending in a granulo-fatty degeneration.

Crocker made the distinction in regard to the location of the pathological process: in the middle and the lower layers of the corium, in the planum type; in the upper part of the corium, in the tuberous variety; and there was involvement of the whole corium in the diabetic form, with more inflammatory phenomena, less connective tissue growth, a greater round cell infiltration, more dilated

blood-vessels and a greater tendency for the lesions to be situated at the hair follicles.

Robinson found the intensity of the process far more marked in xanthoma diabeticorum than in the tuberous form; the process was chiefly in the neighborhood of the hair follicles; there was a greater circulatory disturbance, less formation of connective tissue in the whole tumor and areas of fatty degeneration and amorphous matter. There were no areas of degeneration in the multiplex variety.

Both Unna and Pollitzer separate, on histological grounds, the planum type of xanthoma from the tuberous and diabetic forms. Unna considers that the fatty bodies are infarctions of intercellular lymph channels, with a peculiar fat into which naked endothelia nuclei have escaped. It is his impression that the only difference between xanthoma tuberosum multiplex and xanthoma diabeticorum is perhaps an acuter growth of the latter, the areas being more scattered, having no special relationship to the vessels and undergoing a central fatty change.

Pollitzer believes that xanthoma palpebrarum vulgare is not a neoplasm; it is the product of the degeneration of embryonically misplaced muscle fibres and it bears no histological relationship whatever to xanthoma tuberosum disseminatum. He thinks xanthoma tuberosum and xanthoma diabeticorum are similar processes; they are both connective tissue neoplasms in which the relative proportion of fibrous tissue and connective tissue cells varies in different cases. In both, the cells undergo a fatty degeneration, resulting in the destruction of the cells and ultimately in the more or less complete disappearance of the nodule. The process is more diffuse, according to Pollitzer, and more rapid in the diabetic form.

CASE REPORT.

There came to the skin department of the Pennsylvania Hospital, on February 26th, 1912, a well-built male, of twenty-two years, a laborer, born in Italy, who had numerous large yellow tumors upon the hands, the elbows, the knees, the buttocks and over the tendo-Achilles. The disease started nine years ago, while the patient was living in Italy. There were a dozen hazelnut-sized and larger growths upon the dorsal surface of the hands and the wrists; pigeon-egg-sized areas upon both elbows and knees; two hen's-egg-sized tumors in the gluteal region; and patches, raised fully one inch above the surface of the sound skin and extending the entire length of the tendo-Achilles on either side. The palms and the soles were not attacked. The tumors were firm, hard, painless and not tender to the touch; some were pedunculated while others were attached to the skin and held in the integument with a broad base.

The patient had never been sick and all of the organs were absolutely normal. He has never had an attack of jaundice. Alcohol is used moderately but he does not indulge in tobacco. The family history was negative.

The patient was referred to the surgical ward of the Pennsylvania Hospital and the larger growths were extirpated by Dr. Le Conte. An unusual opportunity was afforded for pathological study, as there was unlimited material.

Sections were made from tumors removed from the hands, the elbows and those over the tendo-Achilles. The slides were stained with eosin and hæmatoxylin or with Scharlach R., the latter to show the presence of fat.

The stratum corneum was found to be much thickened in most of the sections, while the Malpighian layer was somewhat thinner than is usually found and in many instances the papillæ were few in number and quite small. The upper portion of the corium was practically normal, excepting for the presence of an increased number of endothelial cells surrounding the blood vessels and a slight round cell infiltration. Some of the lymph spaces showed the same tendency to be surrounded by a slight infiltration of these cells. A few round cells were also scattered through the upper corium. The middle and lower portions of the corium were filled with round cells and accumulations of many large polygonal, oval or rhombic shaped cells, having a finely granular, pale staining cytoplasm. These latter cells formed large whorls or masses, where in small groups, dense columns, single rows or where dispersed as single cells.

The most of these polygonal shaped cells contained a single, usually centrally placed nucleus. A considerable number, however, exhibited two nuclei and a few of the cells several nuclei. The nucleus had a more or less granular appearance and one or more nucleoli. A delicate protoplasm could be easily discerned stretching from the nucleus toward the periphery of the cell. The structure of these cells resembled markedly that of the sebaceous glands. The blood vessels and the coil glands were surrounded by these polygonal cells. Some of the blood vessels were enlarged and their coats much thickened. At the border of these masses of rhombic shaped cells numerous elongated, spindle shaped fibroblasts could be seen. The nucleus of this latter cell was centrally placed, found at the border, or nearer one pole than the other, and the cell stroma was more or less granular. A large amount of fibrous tissue was found in all parts of the corium, chiefly, however, in the middle and lower portions. The fibrous tissue surrounded the masses of these xanthoma cells, and numerous small groups and columns of these cells were hedged in by this fibrous structure, making a mosaiced pavement effect. Numerous discrete polygonal cells were found in an extensive mesh-work of fibrous tissue. So dense was the arrangement

of this fibrous tissue in certain sections that there was an appearance of muscle structure. Sections of the largest and the firmest growths showed a great predominance of fibrous tissue with only a comparatively few xanthoma cells, either in short, thin columns, small groups or singly. The smaller tumors exhibited large masses of these cells, with a proportional decrease of fibrous tissue.

The sections stained with Scharlach R., presented a marked color contrast, consisting of orange yellow and blue. The orange yellow giving a beautiful picture of the fat reaction; the nucleus of the xanthoma cells and all other portions of the section staining a light or dark blue and the stroma of the polygonal cells an orange yellow. The endothelial cells in a few of the capillary loops extending into the papillæ showed this fatty change. The blood vessels just below the papillæ, in a few instances, presented the fat reaction in the endothelial cells and in the oval and polygonal cells surrounding these channels. A few round and polygonal cells around the lymph areas, in the sub-papillary portion, exhibited the typical yellowish orange color. The great majority of the disease-changes was found in the central and the lower portions of the corium. Fully one-half of some of the sections showed the yellowish-orange reaction in the two latter areas. The orange stained cells had the same arrangement as was so vividly shown in the hæmatoxylin and eosin sections; in whorl or mass formations, a columnar, mosaic distribution, and as single cells. Some of the fibroblasts presented this fatty reaction.

No large masses of xanthoma cells were found in the upper portion of the corium, as Crocker reported in his case of this affection. The fatty granules discovered by Pollitzer in one of the rete cells were absent in my sections. No areas of fatty degeneration or cell destruction were found in my specimens; thus, in this one detail, corresponding more closely to the findings of Robinson than to the cases of Pollitzer.

The theories as to the ætiology of this affection should be mentioned in conclusion. Xanthoma is met with both in children and adults and in both sexes; in children it may be congenital or develop in the earlier years of life. In some of these instances there seems to be a family prevalence; Mackenzie has observed three cases in a family of seven children. Startin, in a brother and sister, and Thibierge in two brothers.

Jaundice was associated with multiple xanthoma in the adult, in twenty-three out of twenty-eight cases tabulated by the Investiga-

PLATE XXII.—To Illustrate Article on The Pathology of Xanthoma Tuberosum
Multiplex, by Dr. FRANK CROZIER KNOWLES.



Fig. 1.
Showing lesions on hands and fingers.



Fig. 2.
Showing lesions on knees.

PLATE XXIII.—To Illustrate Article on The Pathology of Xanthoma Tuberosum
Multiplex, by DR. FRANK CROZER KNOWLES.



Fig. 5.
Showing lesions just above the heels.



Fig. 3.
Showing lesions on elbow.



Fig. 4.
Showing lesions on back of hand.

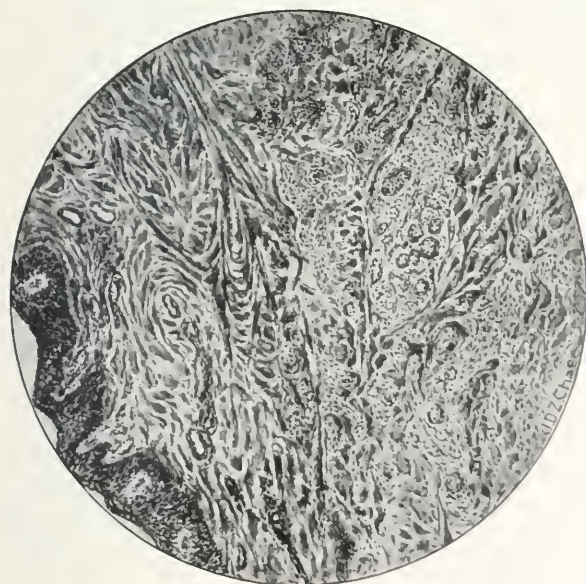


Fig. 6.

Section shows a slight infiltration of endothelial and round cells round the blood vessels and the lymph channels in the upper portion of the corium, also a few round cells scattered through this portion of the skin. The upper corium is otherwise normal.

The middle and lower corium show masses or whorls, dense columns, single rows or single, polygonal, oval or rhombic-shaped cells, and an increased amount of fibrous tissue. Certain portions of the section show a beautiful mosaic arrangement.

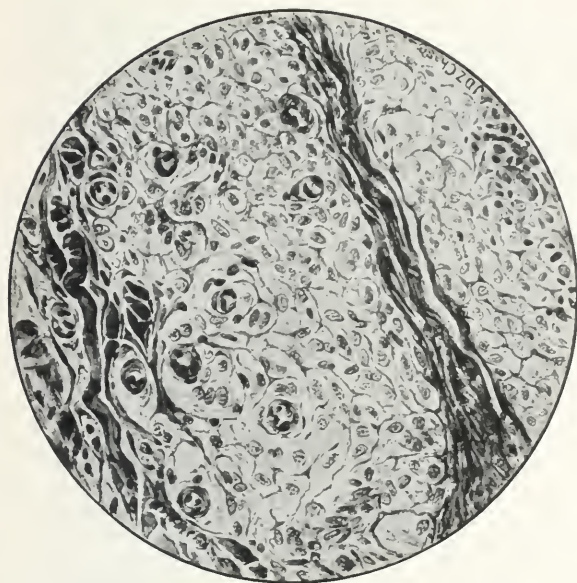


Fig. 7.

Section, under high power, shows a mosaic arrangement of xanthoma cells, their characteristic rhomboidal or polygonal shape and the centrally placed nucleus. Quite a number of the cells exhibit two nuclei and some three or more. The cytoplasm stains faintly and the texture resembles markedly that of a sebaceous gland. The cells are held in a stroma of fibrous tissue. Numerous fibroplastic cells are seen in the section.

tion Committee appointed by the Pathological Society of London. In eight of the tuberous cases recorded by Leven, six had diabetes and one nephritis; of four cases of the mixed type, planum and tuberous, three were free from disease and one had hepatitis. In the forty adult cases compiled by Török, there was a large proportion which had liver affections; a considerable number of these, however, had jaundice after the advent of the multiple xanthomata. According to Crocker, four-fifths of the cases of xanthoma multiplex, about sixty in number, in those above puberty, were associated with chronic jaundice.

Balzer has exploited a parasitic theory as the cause of the affection. Crocker suggests a toxin as being the real factor.

Török considers that xanthoma forms by the proliferative hyperactivity of cells apt to undergo the fatty transformation. His researches point in favor of the transformation of ordinary connective tissue cells and not of special cells—"lipoblasts"—into adipoxanthomatous cells. He believes that the frequent association of jaundice with this condition is due to the localization of the xanthomatous process in the biliary passages or the liver.

Chauffard and Laroche, in their investigations, have come to the conclusion that xanthoma is the result of an excess of cholesterin in the blood.

Pollitzer and Wile, in a recent publication, consider that xanthoma tuberosum represents an irritative connective tissue hyperplasia, in which the extravasation of cholesterol-fatty-acid-ester, present in excess in the blood, serves as the stimulus.

As a résumé it may be stated that xanthoma tuberosum multiplex is a neoplasm, consisting of cells closely resembling endothelium, which give a definite reaction of fat; the process is located chiefly in the middle and lower portions of the corium; there is an excessive amount of fibrous tissue, of fibroblasts, some of the latter also giving the fat reaction; and the ætiology of the disease is as yet unproven.

The thanks of the writer are due to Dr. C. N. Davis for the privilege of reporting the case and to Dr. Paul A. Lewis for assistance in the pathological work.

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DISCUSSION.

DR. POLLITZER, after referring to the paper on this subject by himself and Dr. Wile, which he read at the meeting of the Association in Boston two years ago, said it seemed clear to him that the primary cause of xanthoma was the irritation produced by the extravasation of cholesterol-fatty-acid-ester through the capillaries. That this served as a stimulus, setting up a connective tissue irritation, with the proliferation of the adventitial cells of the capillaries. This irritative inflammatory process in turn provoked the proliferation of fibrous tissue, and the longer the process had continued, the greater the amount of connective tissue.

The speaker said the studies made by the reader of the paper were made on tumors of large size, and in these older growths one could not very well study the pathogenesis of the process. The age of the tumors accounted also for the large amount of fibrous tissue that was found. But as a matter of fact, the fibrous tissue was only a secondary product in this disease. In connection with the well-known relation between xanthoma tuberosum and disorders of the liver, a relation that occurs in about 75% of the cases, the speaker referred to the work of Aschhoff on biliary calculi. Aschhoff had recently shown that biliary calculi were of two kinds: mixed lime-salt calculi and pure cholesterol calculi, and that where there was a single calculus, it was practically always composed of pure cholesterol, and that however many calculi were present, there was only one that was composed of cholesterol, all the others being the result of irritation of the gall-bladder walls—as Naunym had shown long ago—by the first or cholesterol stone. In xanthoma tuberosum there was usually a history of some biliary disturbance on the one hand, and we had to deal with an excess of cholesterol-fatty-acid-ester in the blood on the other. With an excess of this fatty alcohol compound in the blood, there was apt to be a deposit of cholesterol in the gall bladder, giving rise to biliary disturbance, while the same substance extravasated through the capillaries gave rise, in turn, to xanthoma tuberosum. The excess of cholesterol in the blood was the connecting link between gall-stones and xanthoma.

DR. KNOWLES said the microscopic material that had been at his disposal in this case was obtained from large growths. There were no small growths present. As Dr. Pollitzer mentioned, this would naturally account for the large amount of fibrous tissue present in the sections.

ACRODERMATITIS CHRONICA ATROPHICANS: THE
TRANSITION FROM INFILTRATION TO ATROPHY.

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WHEN Herxheimer and Hartmann, in 1902, published their monograph on a certain form of diffuse, idiopathic cutaneous atrophy, upon which they bestowed the title "acrodermatitis chronica atrophicans," they sought, primarily, to establish the existence and recognition of a disease entity, closely related to, but clinically (and in some cases, also histologically) different from various other forms of progressive, diffuse atrophies of the skin. Their work was based upon a series of twelve cases which had come under their observation, and upon a considerable number of case reports occurring in the literature. They did not seek to arrogate to themselves the honor of having discovered a "hitherto undescribed" dermatosis; nor did they reveal any striking and remarkable facts about the disease, which had not been known before. What they did accomplish, however, was this: out of the confused and confusing mass of facts concerning the group of dermatoses indiscriminately thrown together and labeled with the indefinite caption "idiopathic atrophy of the skin," they isolated a series of examples which possessed certain common, more or less well-defined, readily recognizable clinical characteristics; they showed in which manner and in what respects these examples differed from other related dermatoses; in short, they attempted to differentiate between their acrodermatitis chronica atrophicans and the diseases to which it bears resemblances, intimate and remote.

That the classifications of the various dermatoses terminating in atrophy were anything but uniform, and that the different conceptions of the authors regarding the nature and pathogenesis of this class of diseases resulted in a somewhat variegated nomenclature, may be gleaned from even a casual perusal of the literature on the subject. This may be better appreciated by a glance at the bibliographies appended to the publications dealing with these dermatoses.

We find in them such titles as idiopathic diffuse cutaneous atrophy (Buchwald), symmetrical cutaneous atrophy of the extremities (Bronson), atrophica cutis propria idiopathica (Bronson), symmetrical atrophy of the skin (Fordyce), idiopathic cutaneous atrophy with scleroderma (Rusch), symmetrical congestive mottling of the skin (Cavafy), erythromélie (Pick and Klingmüller), erythema paralyticum (J. Neumann), etc.*

The dermatoses bearing these titles possess one characteristic tendency which is common to all: that is, they begin with inflammation and end in atrophy. This atrophy is clinically of a non-resilient type—a condition to which Jadassohn gave the name “anetodermia”—in which the affected skin becomes wrinkled, appears to be redundant, loses its natural elasticity, is disposed in folds and is easily raised from the underlying tissues; when a fold is thus lifted and pinched between the fingers and then released, the skin regains its former relations to the underlying tissues but slowly. Pospelov compared the appearance and consistence of such an atrophic skin to crumpled cigarette paper.

For a systematic classification and a simplification of the nomenclature of the various types of cutaneous atrophies, we are indebted to Finger and Oppenheim, who, in 1910, published a monograph, in which the entire subject is exhaustively considered. The reader is referred to a brief but comprehensive exposition of Finger and Oppenheim's classification, recently submitted by Irvine in a paper read before the section on dermatology of the American Medical Association.

But years before the publication of Finger and Oppenheim's work, many prominent dermatologists contributed valuable papers to the subject of the cutaneous atrophies, in most of which the proper classification or the probable identity of this or that case was the main theme under discussion. Among these may be mentioned the interesting contributions of Unna, Leven, Fordyce and Klotz. In addition to what might be called the “classical” cases of acrodermatitis chronica atrophicans, the literature contains instances of that disease occurring in association with syphilis (Fordyce, Grosz) and with scleroderma (Heuck, Rusch, Kingsbury and others). The association of the disease with tuberculosis (Nicolas and Favre) and with leprosy (M. Oppenheim) has also been observed.

It is chiefly upon the occurrence of the *infiltrations which precede the atrophic phenomena*, and the gradual transition from inflam-

* For full references to the literature see FINGER AND OPPENHEIM, Die Hautatrophien, 1910.

mation and infiltration to atrophy, that Herxheimer and Hartmann base their contentions regarding the individuality of the dermatosis which they designate acrodermatitis chronica atrophicans. In their opinion, the infiltrative lesions which precede the atrophic changes serve to differentiate the disease from other forms of so-called idiopathic atrophic conditions of the skin. They contend that the latter designation does not fit the disease, since the atrophy is not a primary, essential process, but is the result of a secondary process, the outcome of a previous chronic inflammation. The differentiation between the idiopathic atrophies and acrodermatitis atrophicans may be purely a clinical one; and it is their opinion that when an area of atrophy is preceded by visible inflammation and a palpable infiltration, such areas primarily involving the extremities, the clinical picture thus formed deserves the distinction of being called acrodermatitis chronica atrophicans.

It must be said, however, that the views expressed by Herxheimer and Hartmann are not entirely in accord with those of other authors. Finger and Oppenheim (p. 44) for example, in commenting upon the work of Herxheimer and Hartmann with reference to the premises upon which the latter assume the individuality of acrodermatitis atrophicans, state that they do not consider the disease to be a separate entity, but that it should be included in the large group of idiopathic atrophic dermatitides, it being merely a variant of the types comprising the idiopathic atrophies in general. They look upon Herxheimer and Hartmann's group of cases as examples of dermatitis atrophicans diffusa. They argue, further, that because certain inflammations are consistently succeeded by further morbid changes in which the affected integument gradually assumes the atrophic, folded and wrinkled appearance known as anetodermia, the mere fact that in acrodermatitis chronica atrophicans the areas of predilection are *alike* in the majority of the reported cases and that the inflammatory phenomena may be manifested by marked swellings and infiltrations, is not of sufficient import to warrant the differentiation of this type from other forms of progressive cutaneous atrophies. Nor are the variations in the localization of the disease and in the degree of the anetodermia succeeding the dermatitis, so markedly prominent as to justify placing the affection into a class by itself. "We see in acrodermatitis chronica atrophicans," say Finger and Oppenheim, "merely a variant of dermatitis atrophicans maculosa, and not an individual species." In further support of this view, these authors cite cases which conform with the clinical picture of acrodermatitis chronica atrophicans, but in which no signs

of swelling or infiltration were demonstrable. Such cases have been reported, not only by themselves, but also by Rille, Fordyce, Heller, Chotzen, Lang, Bruhns, Meyerhardt and even by Herxheimer and Hartmann.

Beside Finger and Oppenheim, a number of other authors have published views which do not entirely coincide with those expressed by Herxheimer and Hartmann, in their original essay. It will serve no purpose here to speak of these in detail, but I may mention that the articles of Leven, of Kanoky and Sutton and the case report of Kingsbury are of special interest in this connection. In the last two is discussed the possible relationship between acrodermatitis chronica atrophicans and co-existing scleroderma and morphœa.

In a supplementary paper which Herxheimer published in 1905, he describes two cases which, as he says, "*teach us that there is not only a superficial infiltrating, but also a tumor-like form of acrodermatitis.*" The appearance of the latter in acrodermatitic territory, and its spontaneous course quite similar to that of the superficial infiltrating form, point to the fact that we are dealing here with the same process."

Without inquiring further into the relative merits of the different views held by various authorities on the identity and pathogenesis of acrodermatitis atrophicans, I desire to place on record a case which came under the observation of Dr. MacKee and myself, in Dr. Fordyce's clinic, and which, from the clinical standpoint, is strongly corroborative of Herxheimer's observations concerning the occurrence of tumor-like infiltrations and the transitional stages manifested by inflammation, infiltration, atrophy and anetodermia, in the course and evolution of the lesions. Not only may we observe, in this patient, the gradual and progressive changes which begin with dermatitis and end in atrophy, but the case is also remarkable in exhibiting an unusually abundant number and a widespread distribution of infiltrative lesions, in marked contrast to the scattered and isolated infiltrations which have been recorded in the majority of the cases.

It may here be briefly alluded to, that these early, preatrophic infiltrations and tumor-like masses must not be confounded with the later appearing, bluish-red, sharply circumscribed, indurated, *fibrous nodules*, which sometimes occur in the terminal stages of the disease, appearing, as a rule, in the neighborhood of the elbows and knees. Oppenheim has made a careful study of these fibromata, which he regards as one of the "end products" of dermatitis atrophicans, and has published his findings in a series of interesting articles.

Quite recently, two typical examples of acrodermatitis atrophicans, occurring in association with fibrous nodules, were reported in this country: one by Irvine (*loc. cit.*), the other by Ketron. In 1912, Nobl, in a paper entitled, "Multiple Fibromatosis Associated with Acrodermatitis Atrophicans," reported five examples of this kind, with histological studies in each case. In the patient whose case report follows, these fibrous tumors were absent, despite the fact that her ailment was of forty years' duration.

CASE REPORT.

The patient is a female, Mrs. B. D., aged 58, married and born in Germany. Her family history is negative; no other member of her family had had any cutaneous disease, to her knowledge.

PERSONAL HISTORY. She is the mother of 10 children, 1 of whom are living and in good health. Six of her children died in infancy, the causes of death being "diphtheria, croup, summer diarrhoea and convulsions." She has had five or six abortions, which she ascribed to "overwork." With the exception of an attack, some thirty years ago, of jaundice and "enlargement of the liver," she has always considered herself to be in good health; this attack of illness lasted about four months, during which period she was confined to her bed. Since that time she has had no serious illness. Menstruation began at the age of 15 and had been normal until she was 55 years old, when the climacteric began.

PHYSICAL EXAMINATION reveals a stout woman of the robust German peasant type, weighing 165 pounds. The skin of the unaffected portions of the body seems to be entirely normal, as are also the hair and nails. Examination of the nervous system, the circulatory system, organs of special sense, etc., show no abnormalities. There is slight puffiness of the upper eyelids, due probably to excess of adipose tissue; there is no resemblance to the blepharochalasis described by Fuchs. The mucous membranes and the thyroid gland are normal.

Subjectively, the patient considers herself to be in the best of health, her object in applying to the clinic for treatment being to remedy the ulcerations near the ankles.

The urine is normal. The Wassermann and von Pirquet tests are negative. Examination of the blood reveals normal conditions.

Her present trouble began at the age of 14, shortly before the appearance of the menstrual flow. Close questioning, with the object of ascertaining possible aetiological factors for the disease, brought forth the story that in her childhood days, spent on her parents' farm, she was in the habit of running about bare-footed and bare-legged, in winter as well as in summer; she remembers suffering from the cold, but does not recollect attacks of frostbite at any period of her life.

The disease made its appearance on the anterior aspects of both legs simultaneously, a short distance above the ankles. It began in the form of reddened, inflamed and itchy patches, somewhat raised above the normal skin, somewhat rough and dry, later becoming scaly; there never had been any moisture at any stage of the malady. These spots increased very slowly in size, new ones appearing over the shins and calves in the course of the succeeding ten years. Some of these patches would coalesce, others would remain isolated; all of them began as itching, inflamed plaques which soon became covered with thin scales. Within a dozen years after the beginning of the disease, the entire integument of the legs, extending from the bases of the toes to the region below the patellæ, was involved in the process. The diffuse, inflamed, bright-red patches slowly became

transformed into darker red, bluish and purplish areas, following which there appeared rounded, vaguely defined, slightly elevated, purplish-red, smooth plaques, which were soft to the touch and resembled little mounds in the skin.

During the succeeding three or four years, the process seemed to have become quiescent, apparently coming to a standstill at the knees; in the meantime, however, marked changes took place in the appearance of the affected portions of the skin on both legs. The raised plaques became more indefinite and ill-defined, the skin over them wrinkled; they became more confluent, lighter in color, gradually merging with the surrounding skin, which had assumed a pale, parchment-like appearance, free of scales and with the tendons and the superficial veins shining through it.

The process again resumed a renewed activity, attacking the skin around the knees; in this region, the purplish and bluish raised plaques seemed to have been of much shorter duration, soon giving place to a markedly wrinkled, soft and silky envelope, through which the dilated veins showed prominently. From here the disease spread slowly upward, appearing as isolated and confluent, rounded, raised, reddish to purplish tumor-like masses of a doughy consistence, implicating the skin of the thighs to within three or four inches of Poupart's ligament in front, extending to the crests of the ilium at the sides and to the lower lumbar vertebræ behind. Thus, with the exception of the soles of the feet, the dorsal surface of the toes and a broad area below Poupart's ligament, the entire integument of the lower extremity, as well as that of the buttocks, became involved in the process. During the last four or five years there had been no evidences of further progression upward. Subjectively, the patient complained of a moderate amount of pruritus, which was readily relieved with a soothing lotion.

The pertinent fact in this intelligent woman's narrative was this: all regions of the skin implicated by the disease process finally became atrophic and no atrophy occurred without a preëxisting inflammation and tumor formation, in any portion of the affected integument.

EXAMINATION. Three distinct types of tissue changes may be seen at a glance. On the dorsal surfaces of the feet and on the legs, the integument is thin, parchment-like, glazed, somewhat waxy looking and transparent—these appearances being most noticeable on the anterior surfaces of the legs, a little above the ankles. The veins are prominent, dilated and tortuous and show distinctly through the skin, as dark blue strands. With the patient in the erect position, the skin over the flexures of the joints appears in fine, parallel wrinkles, while on the upper portion of the legs as well as over the dorsal surfaces of the feet, the integument appears to be somewhat stiff and bound down to the underlying parts, not, however, to the extent seen in cases of true scleroderma; in the latter, the skin is opaque instead of being transparent and is firmly attached and board-like, instead of being parchment-like and movable, as it is in acrodermatitis atrophicans. The color varies from a dark pink to a yellow and presents a somewhat mottled, muddy looking appearance, with brown pigmented and irregular reddish and bluish and purple areas scattered here and there, chiefly over the tibiæ. The skin covering the toes appears to be normal. Chronic, sluggish, indolent ulcers with sharply defined edges, are to be seen on the inner aspects of both ankles and on the dorsum of the right foot. (Contrary to expectations, these ulcers healed quite readily under ordinary ichthyol ointment dressings.)

Over the anterior and lateral surfaces of the knees, the thin, wrinkled, glazed appearance of the skin is quite pronounced. Here the so-called "crumpled cigarette paper" appearance is marked; the skin has a soft, silky feel, lies in folds which may be easily lifted between the fingers, its color a diffuse pink. The veins here are also very prominent. In the popliteal spaces, the skin is also thinned and atrophic, but it adheres more closely to the underlying tissues, than it does in front of the knee joint.

Beginning just above the knees and extending upward to within three or four

inches of Poupart's ligament anteriorly, and to the upper border of the sacrum posteriorly, the skin of the thighs and buttocks presents a large number of slightly elevated, circular and oval, reddish, bluish and purplish tumor-like masses. These vary in diameter from 4 to 18 mm. Some of them are perfectly flat, others raised and mound-like; to the palpating finger, they are soft and doughy. On the lower third of the thighs, many of them have coalesced, their peripheries imperceptibly merging into each other; further up the thigh, they appear more prominent, being separated from each other by depressed areas of atrophic skin; here the tendency to confluence is much less in evidence than it is lower down. The integument over these masses is perfectly smooth in some, in others it is slightly wrinkled into fine, parallel lines. On the backs of the thighs and on the buttocks, they are less prominent and more closely aggregated than in front and on the sides; here the skin shows a more diffuse, dark-red tint, like that above the knees. At first glance, the appearance of the skin on the thighs is not unlike that sometimes seen in cases of mycosis fungoides and some types of leukæmia cutis.

The borders of this area of infiltration are rather well defined, but the individual nodules at the periphery of the area merge gradually into the adjacent healthy skin, giving the impression that the process is continuing upward; there is no sharp line of demarcation between the affected and the unaffected skin. The skin of the upper and inner portions of the thighs, anteriorly, is intact. There is an absence of hair follicles and sweat in the diseased areas.

HISTOPATHOLOGY.

The following histopathological report is from the Dermatological Laboratory of the Vanderbilt Clinic.

Sections for histological study were removed under local anæsthesia with one-half of one per cent. cocaine solution. Three biopsies were made, each from a different type of lesions: one from a small, flat, dark-red plaque on the thigh, which, the patient thought, had only recently appeared; another was a small segment from one of the raised, purplish infiltrates above the knee; the third specimen consisted of a small fragment of parchment-like, atrophic skin, from the integument over the knee-joint. These specimens were immediately placed into a solution of equal parts of 10% formaldehyde solution and Zenker's fluid, fixed for twenty-four hours, dehydrated in acetone, cleared in benzol, blocked and cut in paraffin. They were stained with hæmatoxylin-eosin, Weigert's elastic tissue stain, Unna's orcein, Hansen's stain, Levaditi's stain, polychrome methylene blue and methylene-blue-eosin stain.

The microscopical changes were practically identical, with one or two exceptions, with those found in the literature. Three varieties of morbid changes could be demonstrated, although a distinct separation between these was not feasible. The first showed beginning inflammation and infiltration; the second, a more advanced infiltration with accompanying atrophic changes; while the third showed

the atrophic changes in a further advanced stage, portions of the infiltrations being replaced by fibrous tissue.

STAGES OF INFLAMMATION AND INFILTRATION. The earliest changes in the epidermis consisted of a very slight parakeratosis, the stratum lucidum being very poorly defined and the stratum granulosum being absent. The stratum spinulosum was reduced in thickness, with a diminution of the lymph spaces; the intercellular bridges were greatly shortened; the protoplasm of the cells showed degeneration, manifested by their poor staining ability. The basal cells retained their shape and tinctorial properties, the papillæ being still present, but diminished in length. Just beneath the basal cell layer was a band of œdematous collagenous tissue, of about the same width as the epithelium; this band showed a very slight grade of infiltration, consisting of a few plasma cells and some small mononuclear leucocytes, the latter with a darkly staining nucleus, which occupied the entire cell. This layer did not show a distinct fibrillary structure. The blood vessels showed no changes. There was an almost total absence of elastic tissue in this portion of the integument, the few visible fibres being poorly stained and showing cloudy swelling.

In the lower portion of the pars papillaris and upper portion of the pars reticularis, the pathological changes were more marked. Here the bundles of collagenous material were atrophied, being separated from each other by small, mononuclear cells, having a granular nucleus. These infiltrating cells were so disposed, that a wide separation of the connective tissue bundles resulted. A large number of plasma cells were also present, these being more abundant around the larger bundles of connective tissue and the blood vessels. There was no increase in the number of blood vessels, while those which were present showed very thin walls, with slight endothelial proliferation. The elastic tissue was almost totally absent in these infiltrated areas.

The deeper layers of the pars reticularis showed a like condition, only to a lesser degree, the same types of cells being present. Around the blood vessels the infiltration was more manifest and consisted chiefly of plasma cells; there was also a proliferation of endothelial cells. The elastic tissue was only slightly diminished in this area. There was atrophy of the hair follicles and sweat glands. No changes in the subcutaneous fat were visible.

STAGE OF EXTENSIVE INFILTRATION WITH MORE ADVANCED ATROPHY. In this stage, changes in every way similar to those described above were seen. Here, also, the stratum lucidum was pres-

ent, the stratum granulosum being absent: but in addition, there was a greater reduction of the stratum spinulosum. The lymph spaces were greatly narrowed, with corresponding shortening of the intercellular bridges. The papillæ were totally obliterated, the junction of the epidermis and pars papillaris appearing as a straight line. The epithelium was narrowed and composed of only four to six cell layers. There was thinning of the subepithelial collagenous band, which was about one-third to half the thickness of the overlying epithelium. Just beneath this band, in the lower portion of the pars papillaris and upper portion of the pars reticularis, there was a marked diminution of the connective tissue bundles; in some areas they were entirely absent, being replaced by aggregations of small mononuclear lymphocytes and some plasma cells. These dense aggregations of lymphocytes showed only a very few fine fibres of connective tissue within their substance. There was an almost total absence of blood vessels in these circumscribed areas, only a few small capillaries being present; the remaining blood vessels showed no abnormalities; but in some of the more scattered cell aggregations, a few blood vessels, showing marked endothelial proliferation, were seen. No elastic fibres were visible in these areas. The borders of the cell masses were ill-defined, merging into the surrounding connective tissue; here numerous plasma cells were seen, together with some fibroblasts. Here, also, were seen the small cells containing the darkly stained nucleus. The hair follicles and sweat glands were reduced in number, those still present showing extensive atrophy, with loss of elastic tissue.

STAGE OF ADVANCED ATROPHY. In this stage, the same state of affairs as that described above was found to exist. The epithelium and the subepithelial collagenous band remained unchanged. The circumscribed cell masses described above, however, were absent. The connective tissue had become more fibrous in character, taking the stain very poorly. The same type of scattered cell infiltration was still present, but to a lesser degree. There was an almost complete absence of hair follicles and sweat glands; the arrectores muscles were atrophied; the nerve fibres were unchanged; the great decrease in the amount of elastic tissue still obtained.

To summarize: we found in these sections, marked attenuation of the epithelium with loss of the papillary bodies; a constant subepithelial band of collagenous tissue, through which the infiltrating cells did not penetrate. The greater portion of the infiltrating cells consisted of lymphocytes of uniform size and plasma cells. The transition from the early infiltrating stages to the terminal atrophic

stages was a very gradual one, each stage merging into the next without definite lines of demarcation. The relative absence of elastic tissue was one of the most constant and striking features in the histological picture.

In comparing these findings with those of other observers, we were not able to confirm the extensive vascular changes and the loss of subcutaneous fat, upon which considerable emphasis had been laid by others. In regard to the latter point, the presence of subcutaneous fat in these sections may be explained by the pronounced obesity of the patient. In all other respects, however, the morbid changes here described did not materially differ from those of previous publications.

The clinical picture which this patient presents closely resembles the descriptions of several cases heretofore published, in which the disease manifested itself only on the lower extremities, the upper limbs remaining unaffected. Such cases were described by Buchwald, Groen, Friedheim, Riedel, Jackson, Elliot, Pick, Pollitzer and others. But in respect to the great number and large variety of infiltrative lesions, presenting to the naked eye the successive morbid changes which they undergo, this case seems to be unique. Many of the larger nodular infiltrations, which when they were first seen showed no signs of atrophy, after an interval of six to eight weeks would present a decided flattening of the mass, together with a distinct wrinkling and thinning of the overlying skin. This clinical observation proved to be fully in accord with the histological findings; namely, that the hypertrophy and the atrophy occur simultaneously within the substance of the infiltrative masses. This is a point upon which Herxheimer, in his first publication, laid considerable emphasis.

As to the abundance of infiltrative lesions in our patient, their number is in marked contrast to the isolated and more or less widely scattered corresponding types of lesions in other cases. In the twelve cases which Herxheimer and Hartmann described in their monograph, these infiltrations were most prominent in cases 1, 9 and 11. In case 1, they were most marked on the extensor surfaces of the fingers, over the ulna on the right arm, over the left elbow and at the root of the nose. In case 9, they were present on the dorsal surfaces of the feet and on the back of the left hand, in the form of isolated nodules. In case 11, the infiltrations were seen chiefly on the feet and lower portions of the legs. In cases 2 and 5, they appeared over the elbow joints on the right side; in case 7,

a strip over the ulna: in case 8, the dorsal surfaces of the fingers were thickened; and in case 10, a small infiltrated nodule was present on the back of the right hand.

In the majority of cases which present the clinical features of acrodermatitis atrophicans, as formulated by Herxheimer and Hartmann, these infiltrating lesions either are present at the period of observation, or have been present at some previous time, during the development of the disease. In the case here described, practically the entire integument of the thighs exhibited these infiltrations. In Herxheimer's cases, they varied in number from a single nodule to several isolated and scattered lesions on the face or the extremities. It is very probable that numerous instances of the disease, in every way resembling our case, but lacking the infiltrated masses, have been reported under such titles as erythromélie, atrophia cutis idiopathica, symmetrical cutaneous atrophy of the extremities, etc. How are we to account for the absence of palpable infiltrations in these cases? Taking into consideration the fact that the histological changes in the great majority of the reported cases are almost identical in character and that,—barring the presence of infiltrations,—there is a striking similarity in the appearance, progression, evolution and involution of the dermatoses described under these various names, it may safely be assumed that infiltrations were present, at one time or another, in all cases of this type. The infiltrations may be so small as to pass by unnoticed; the progress of the disease is exceedingly slow and insidious; it causes the patient little or no inconvenience, so that he takes but little note of its behavior. In the five cases of this type which the writer has seen, the duration of the disease, at the time of observation, ranged from ten to forty years, so that the patient's account of the beginnings of the disease may not be dependable. Further, the infiltrations may not be present during the time that the patient is under the physician's observation, but they may appear at some subsequent period. Such an instance may be cited here. In 1904, Dr. Klotz (loc. cit.) described the case of George Sch., under the title, "A Case of Chronic Symmetrical Diffuse Hyperæmia of the Extremities (Erythromélie)." In this paper, Klotz stated that the patient presented neither infiltrations nor atrophy of the skin, while under his care. During the course of his wanderings from one dermatologist to the other, this patient came under my observation on Feb. 17, 1909, that is, five years after Dr. Klotz had had him under treatment. I found, on the right thigh, several soft, doughy, tumor-like masses, which had not been there five years previously. Furthermore, the entire

affected skin showed evidences of unmistakable atrophy, together with the characteristic anetodermia around the knees. Being at the time ignorant of the fact that this patient formed the subject of Dr. Klotz's paper, I entered the diagnosis of *acrodermatitis chronica atrophicans* opposite the patient's name. A subsequent study of the case convinced me that that diagnosis was a correct one.

From a study of this case and observation of other cases to which I have had access, I have gained the impression that we have in *acrodermatitis chronica atrophicans* a symptom-complex *peculiar to itself*; that the constant clinical characteristics, especially the transition from infiltration to atrophy, which obtain in this dermatosis, fully justify its separation, in a nosological sense, from other forms of progressive diffuse cutaneous atrophies; and that the designation, *acrodermatitis chronica atrophicans*, as originally suggested by Herxheimer and Hartmann, cannot be improved upon, until at least some of the ætiological factors of the disease have been brought to light.

For the laboratory work involved in the study of this case, including the urine and blood examinations and the serological tests, as well as the preparation of the histological specimens, I am indebted to Dr. E. J. Snyder, to whom I extend my sincere thanks for his aid in the study and interpretation of the sections. I take this opportunity, also, to thank Dr. J. A. Fordyce for his kindness in permitting me to make use of the material from his clinic.

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PLATE XXV.—To Illustrate Article on *Acrodermatitis Chronica Atrophicans*;
the Transition from Infiltration to Atrophy, by Dr. FRED WISE.



Fig. 3.



Fig. 2.



Fig. 1.

showing nodular lesions of thigh, atrophy of skin over knees and shins and sharp limitation at the buttocks. Also ulcerations at ankles.



Fig. 4.

Low power. Infiltrative stage, showing fibrous tissue separated by infiltrating cells; beginning atrophy of epithelium; thinning of the interpapillary pegs.

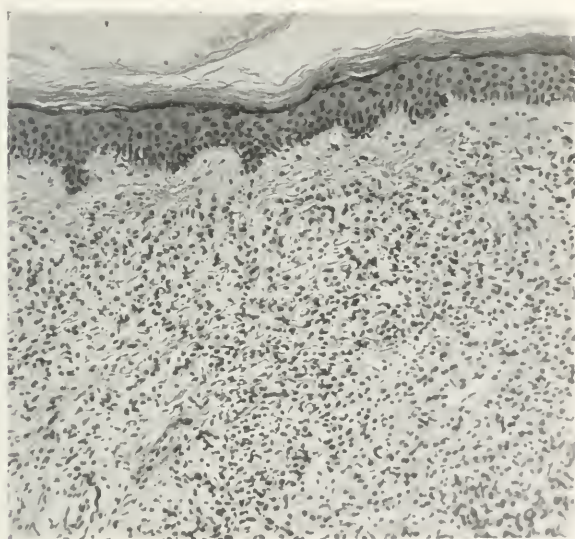


Fig. 5.

Infiltrative stage, showing the same changes as in Fig. 4, under high power.

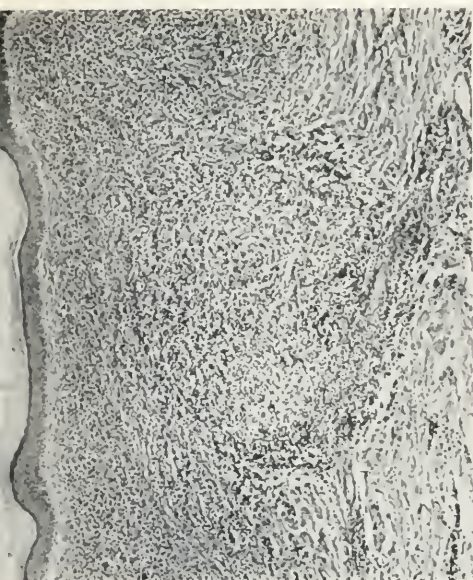


Fig. 6.

Hypertrophic stage, showing atrophy of epithelium; loss of inter-papillary pegs; formation of nodules in the corium. Low power.

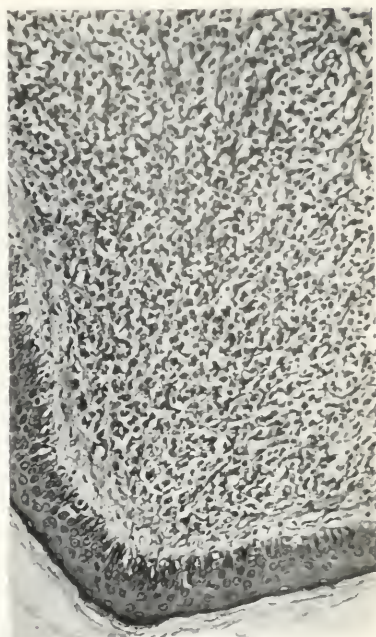


Fig. 7.

Hypertrophic stage. High power, showing the same changes as in Fig. 6.

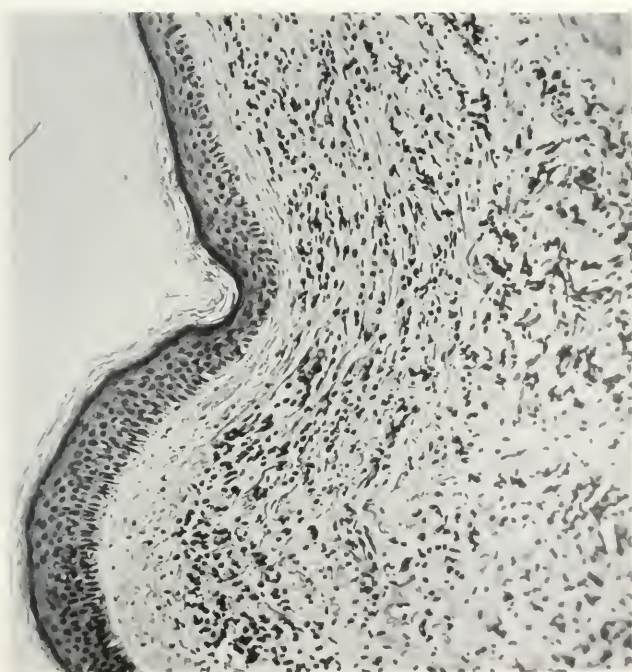


Fig. 8.

Atrophic stage. High power, showing disappearance of infiltrating cells, with resulting fibroid changes in the dermis.

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CLINICAL REPORT.

A CASE OF RHINOSCLEROMA.

TREATMENT WITH AUTOGENOUS VACCINE.

By HARRY E. ALDERSON, M.D., San Francisco.

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San Francisco, California.

THIS is the first example of rhinoscleroma reported from the Pacific Coast. The patient is a native of the Mexican City of Guadalajara, State of Jalisco—24 years old, well nourished and, barring his rhinoscleroma, in good health. He is intelligent and it is believed that the history which he gives is reliable. Since childhood he has worked as a farm laborer. His habits are good. His family history is negative. He has never had venereal diseases nor syphilis and has never been otherwise ill. He is of clean habits, and it is evident that he takes fairly good care of himself. He resided only in Northern Mexico and in Southern California, before coming to San Francisco. He does not remember ever having come in contact with, or ever having seen any one with a disease resembling his present complaint.

Seven months ago, he first noticed a small red papule on the left side of the anterior part of the nasal septum. Frequent picking at the lesion caused bleeding and crusting. It steadily increased in size until the entire left nostril became occluded in a few months.

When the patient first called at the Stanford University clinic, his left nostril was seen to be almost completely occluded by a fairly hard new growth, covered by dark red, intact epithelium. This tumor came mostly from the nasal septum and floor, and extended around to the outer wall. A tiny crevice, through which a small probe could be introduced only a few millimeters, remained in the centre of the nostril. From this slit a thin yellowish secretion oozed. The growth involved the entire left nasal cavity as far back as the naso-pharynx. The uvula was oedematous, reddened and presented several superficial ulcerations. The entire hard palate was thickened and covered with many very superficial coalescing ulcerations with a slightly adherent, yellowish exudate and irregular, ragged borders. Similar ulcerations appeared on both tonsils. The ulceration did not extend deeply at any point. The left tear duct was swollen and occluded by the swelling (as evidenced by the failure to carry off the lachrymal secretion).

On the external surface of the left ala nasi, in the depression, there appeared

a pea sized, round outgrowth, similar to the one in the nostril. The lesions were not painful on pressure and the only discomfort they caused was that due to mechanical interference with nasal breathing.

BACTERIOLOGICAL REPORT BY E. C. DICKSON: "Culture and smears were taken from the nostril by introducing a platinum loop into the narrow cleft which was left. Examination of the smear showed many cellular elements, some of which were polymorphonuclear leucocytes, others large mononuclear cells resembling the large mononuclear cells of the blood, and many short Gram negative bacilli which had a definite capsule. Cultures on agar agar extract showed a profuse, moist, slimy growth which was grayish in color. Cultures on Loeffler's serum showed at first a similar growth, with subsequently an apparent digestion of the solid medium.

"Smears taken from the agar agar extract showed a pure culture of a Gram negative bacillus, with a definite capsule, and the hang drop preparation showed that it was non-motile.

"Transfers to the different media showed that on agar agar stabs, and gelatin stabs, a characteristic nail-head growth developed on the surface, with a thin streak of growth along the line of the stab. The gelatin was not liquefied. Litmus milk was turned slightly acid, but did not coagulate. Culture in peptone solution showed no production of indol.

"Subsequent cultures taken on two different occasions showed pure growth of an identical bacillus."

A piece of the growth in the nostril, and also the nodule on the ala nasi were excised for histological examination. The wounds healed readily and the growth slowly but completely returned in these areas. The tissue was fixed in alcohol and imbedded in paraffine. Sections were cut serially and stained in various ways.

PATHOLOGY. The lesion from the outer surface of the ala nasi shows the following structure: The process is a granuloma. The infiltrating mass of plasma cells is densely packed and situated mostly in the lower and mid-corium. It is associated with almost complete disintegration of the collagen and considerable destruction of the elastic tissue. Scattered through this plasma cell mass are many pale, swollen, vacuolated cells (Mikulicz cells), and also swollen degenerated connective tissue cells, polymorphonuclear leucocytes and a few scattered mast cells. There are no true giant cells. Occasionally there may be seen cells which strongly suggest intermediate stages between connective tissue cells and the Mikulicz cells. In the places where the latter are most numerous, there is the greatest disorganization of the connective tissue, and in these areas the rhinoscleroma bacilli are most numerous. Groups of these bacilli showing bipolar staining (Unna's polychrome methylene blue, orange G, tannin method) are readily seen. Most of them are inside the Mikulicz cells; but some few may be observed extracellularly. The bacilli are quite numerous in some of the Mikulicz cells and are not seen in any other type of cell.

So great is the disorganization of the connective tissue and the elastic fibres, that in some of the sections many of these infiltrating cell masses became detached and floated free in the balsam before it had hardened.

There are many blood vessels to be seen. They are dilated and most of them full of blood cells; their walls are greatly hypertrophied, and the endothelial cells are swollen. Each vessel is surrounded by a "cuff" of plasma cells.

The collagen, where present, is represented mostly by fine, loosely connected strands which are either feebly acidophilic or basophilic. In a few places there are fairly thick collections of these strands.

The elastic tissue has been mostly destroyed so that only fairly intact fibres

can be seen grouped around an occasional hair follicle or blood vessel. As a rule none appear in the upper corium; but occasional isolated, broken fibres may be seen immediately beneath the epidermis.

There is a narrow subepidermal zone which is œdematous and in which the infiltrating cells are relatively few.

The epidermis shows a moderate degree of intercellular œdema, an increase in the thickness of the stratum granulosum, and hyperkeratosis. The stratum corneum is actively desquamating.

The tissue taken from the intranasal part of the process, at the mucocutaneous junction, shows this condition much more pronounced. The œdema, both in the corium and in the epidermis, is relatively very great. There is also greater disorganization of the connective tissue and elastic tissue. Large parts of the corium seem to consist entirely of a mass of plasma cells, with occasional Mikulicz cells and groups of polymorphonuclear leucocytes. In places, the connection between the epidermis and the corium is so insecure that in most of the sections the former became separated by the microtome knife.

SYMPTOMATOLOGY. The patient had not lost much in strength but was a little below weight because, for a while, he did not get sufficient food. His appetite was good. He perspired freely every night. The pharyngeal irritation caused him to cough more or less constantly. His bowels were regular and the movements normal.

GENERAL EXAMINATION: The man was fairly well nourished and fairly well developed. His head was well shaped and thickly covered with black, rather oily hair. The skin was seborrhœic, but there were no inflamed areas excepting those involved by his disease.

The eyes, ears and nose presented nothing abnormal excepting the rhinoscleromatous process already described. The right nostril was normal and unobstructed.

The teeth were sound, but not clean. The tongue was heavily coated. The palatal lesions have been described.

The anterior and posterior cervical glands were palpable, those on the left side being the more noticeable.

The thyroid was not enlarged.

Systematic, thorough examination of the thorax, abdomen, genitalia and the extremities revealed no abnormalities, excepting the following unimportant conditions: the inguinal glands were slightly palpable; the lower legs showed a few faintly marked pigmented scars which the patient stated were due to old injuries.

The temperature, pulse and respiration were normal.

The Wassermann reaction was negative.

The blood count gave the following results: R. B. C., 5,100,000; hæmoglobin, 90%; W. B. C., 13,600; polymorphonuclears, 74%; lymphocytes, 22%; large mononuclears, 2%; transitionals, 2%.

The urine was normal. The stools showed complete digestion and no abnormal contents.

TREATMENT AND COURSE.—As a result of his having better food and living under better hygienic conditions and in the more bracing climate of San Francisco, the general state of his health improved very much—but the disease process did not abate. Before coming to this city, he had been treated by a physician who had made a diagnosis of lues and had given a prolonged, vigorous course of mercury and potassium iodide. The physician wrote to me that the disease was not influenced in the slightest degree by this treatment.

For a brief period the patient was kept in Lane Hospital where

PLATE XXVIII.—To Illustrate Article on A Case of Rhinoscleroma; Treatment with Autogenous Vaccines, by Dr. HARRY E. ANDERSON.



Fig. 2.
Showing clinical appearance of the lesions.



Fig. 1.
Showing clinical appearance of the lesions.

he was carefully observed and the various laboratory examinations were made.

He was given sodium salicylate (0.3 gramme every three hours) for a week without any effect. He was also given a potassium chlorate mouth wash and gargle.

An autogenous vaccine was made by Dr. E. C. Dickson, from the secretion forced out of the left nostril (from which a pure culture of the rhinoscleroma bacillus was readily obtained). Five subcutaneous injections of 200,000,000 each, and one of 100,000,000 were given at irregular intervals (the shortest being one week, and the longest sixteen days). After the patient left the hospital he called at the skin clinic for his treatment. On account of the severe local reaction at the injection site, which followed each vaccine inoculation, and also because the patient rebelled, these injections were not given regularly. Each time, there appeared at the injection site on the forearm, within twenty-four hours, a reddened swelling. This inflammatory reaction rapidly spread and soon involved a considerable area over the forearm and the epitrochlear and axillary glands became hard and painful. Soon there would appear in the centre of this area, around the point of inoculation, a fluctuating round swelling, averaging 1 cm. high and 2 cm. across. This would never break down; but would slowly undergo resolution, leaving thickened, pigmented skin to mark the spot. This increased thickness would persist for several weeks, but would gradually become less pronounced. The epitrochlear and axillary glands likewise gradually subsided.

Repeated examinations of the vaccine showed that it was sterile, and it is hardly necessary to state that the injections were made under strictly aseptic conditions. There was no indication of a local rhinoscleromatous process in the areas injected, but the reaction and the subsequent thickening were much more pronounced than one would expect after an ordinary inflammatory process, or after the injection of a staphylococcus emulsion or any of the other vaccines in common use. It is difficult to avoid the conclusion that this process was due to some specific local effect of the killed rhinoscleroma bacilli.

It would have been very interesting to have made biopsies of these reaction areas at different times, to have tried various control injections and to have attempted the inoculation of the living organisms—but, owing to the patient's ignorance and his suspicious temperament, it was feared that too many experiments would cause him to lose confidence in his physician. As it was, we are fortunate in retaining his confidence after weeks of futile treatment. He is now in the mountains; but will return to the city soon and then further observations will be made.

As for the progress of the disease, after these five vaccine injections, it cannot be said that it has been arrested. On the contrary, the lesions have slowly but surely increased in extent. However, the nasal secretion has diminished quite perceptibly and the mouth lesions have a much cleaner appearance. How much of this was due to the use of the mouth wash

and gargle cannot be determined now. It is interesting to relate that, although material from the nasal lesion produced pure cultures of the bacillus, the growth obtained was rather scant when compared with the abundant growth which was very readily obtained before the patient had had any treatment.

It is believed that the experience with this case has been sufficiently encouraging to warrant the assumption that perhaps properly spaced inoculations of the autogenous vaccine may have a favorable effect in arresting the disease process. This will be attempted when the patient returns for further treatment.

SPECIAL REPORT.

REPORT OF THE COMMITTEE ON STATISTICS OF THE AMERICAN DERMATOLOGICAL ASSOCIATION.*

S. POLLITZER, M.D., New York, *Chairman*.

IN accordance with a resolution passed at the meeting of this Association in May, 1912, the annual collection of statistics of cases seen by members of the Association terminated with the report then submitted for the year 1911, and the Committee begs leave to submit herewith its final report on the grand total of cases the collection of which was begun at the first annual meeting of the Association in 1877.

It has been the custom in the past to summarize the statistical reports every ten years; but the summary due in 1907 for the previous decennium was omitted and the Committee deems it proper therefore to submit a summary of the annual reports from 1897 to 1911—the last year for which reports were made—in a separate table. This table probably presents a more correct view of the relative proportion of dermatological cases than the larger table covering the results for the longer period. In the 14 years, 1897-1911, inclusive, 369,970 cases were reported, more than half of all the cases reported during the period of 34 years. The reports for the later period come from a greater number of observers and cover a larger geographical area; they represent to a considerable extent the riper experience of dermatologists whose diagnostic skill naturally will have increased as the years have passed. New titles of diseases added in later years of course do not appear in the reports for the earlier years, and their inclusion in the grand total gives these diseases an incorrect and disproportionate value. For instance, 495 cases of prurigo are recorded, being 7 per 10,000 of the grand total, 679,376.

* Read before the 37th Annual Meeting of the American Dermatological Association, Washington, D. C., May 6-8, 1913.

But this disease was not reported until 1897, and the 195 cases of it occur in a total of 369,970 cases reported since 1897, being 13 per 10,000.

In regard to both these tables, covering respectively 369,970 cases for 14 years and 679,376 cases for the entire period, it may be said that no compilation of dermatological statistics comparable with them in point of size has ever been made. The only collection of similar statistics hitherto published are those few tables made by individuals as a record of their personal experience covering a number of years. But while such individual statistics are not to be compared with ours in point of magnitude, they possess possibly the advantage of greater accuracy. For it must be admitted that in a compilation made from reports of many dermatologists extending over a period of more than a third of a century there will be many errors of diagnosis. The younger dermatologists of 1877 were not so expert in diagnosis as they became in later years. The increase in knowledge and in diagnostic skill is exhibited in the changes in the ratio of cases of eczema reported by members in the course of years. In the first annual report of the Association, 32%—nearly one-third—of all cases were recorded as eczema. In the succeeding years this enormous ratio gradually grew less, the average for the past 14 years being 18.5%. It is true that our conception of eczema has in some respects become a little more definite in the course of years; that certain groups of dermatoses, as dysidrosis, were removed bodily from eczema; but it seems probable that many dermatoses were labeled eczema in the early days that with increased diagnostic skill were later relegated to a different class. It is perhaps not without bearing on this opinion that in the first report of the Association there was not a single case of scabies. It seems incredible that no case of scabies presented itself at any dermatological clinic in America in the year 1877-78, though it is well known that this disease was comparatively rare in this country at this time. It is reasonable to assume that the cases of scabies were erroneously included under eczema.

In regard to the rarer dermatoses, while on the one hand some cases will naturally have been overlooked and entered under an incorrect title or as undiagnosed, on the other hand a newly described disease is often seen too readily by the young and enthusiastic observer. Thus in one year 16 cases of acanthosis nigricans were reported from one clinic in a large Eastern city, and 5 cases of hydradenitis suppurative (papulopustular tuberculide) was reported from one clinic of modest dimensions in a Western city. In view of the rarity of these diseases it is obvious that the reporters exhibited more enthusiasm than diagnostic skill. These two factors, excessive enthusiasm and failure to recognize a rare disease, tend to neutralize one another in our statistics. The increase in the number of dermatological societies, of which one or more exist in every large city throughout the country, has tended to increase accuracy in the reports of later years. Dermatologists nowadays exhibit their rare cases

and their diagnoses are confirmed or amended after discussion with their colleagues. Taken all in all, therefore, the conjoined reports of the members of the Association as presented in the table giving the results for the last 14 years may be regarded as conveying a fairly accurate view of the relative numbers of the various dermatoses *as the cases present themselves to the dermatologist*. This is particularly true for the common diseases.

On arranging the diseases reported in the order of their frequency it appears that 6 dermatoses constitute a little more than half of all cases seen by dermatologists. These 6 diseases are:

Eczema	18.6%	Impetigo	5.2%
Syphilis	9.4%	Pediculosis	3.4%
Acne	8.4%		
Scabies	5.9%	Total	50.9%

Following these in order of frequency we have:

Tinea trichophytina, 3.1%; urticaria, 3.1%; psoriasis, 2.7%; and alopecia (exclusive of areata), 2.5%.

These ten diseases cover 62.3% of all dermatoses. If seborrhœa, 1.9%; seborrhœic eczema, 2.1%; rosacea, 1.5%, and alopecia were considered under one head as different forms of one disease, we should find that the 10 diseases of greatest frequency covered 67.9% of all dermatoses—a little more than two-thirds.

These data may be of service to teachers of dermatology in indicating the particular diseases with which it is most important to familiarize the student.

Continuing our inspection of the table, we find next in order of frequency:

Dermatitis venenata	2.4%	Verruca	1.1%
Furunculus	1.8%	Herpes zoster	0.9%
Ulcers	1.7%	Alopecia areata.....	0.9%
Epithelioma and cancer....	1.6%		
Pruritus	1.4%	Total	11.8%

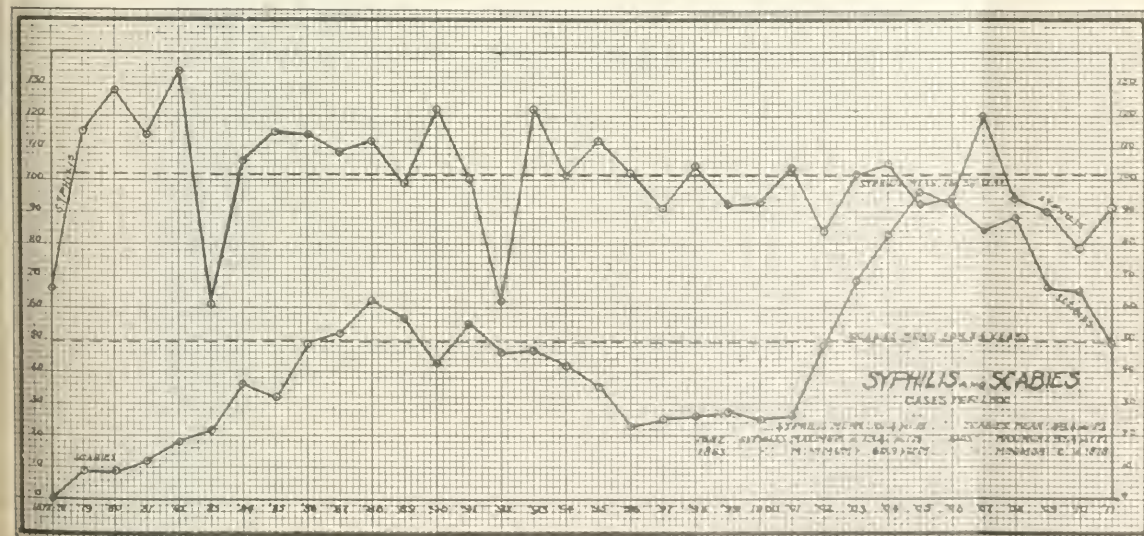
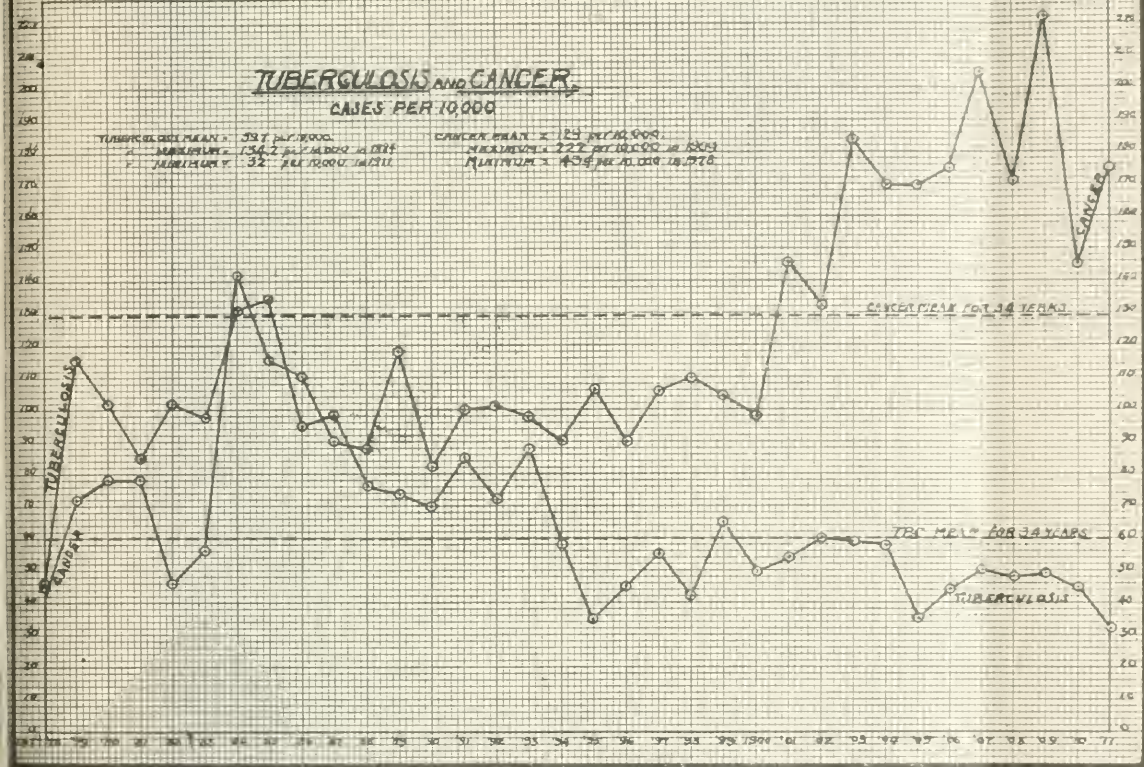
Adding these figures to the total for the 10 diseases enumerated above, we find that 18 diseases include approximately 80%, or four-fifths of all dermatoses seen, leaving the remaining one-fifth for the other 173 diseases enumerated in the list.

Among the diseases of great rarity the members of the Association have reported during the years 1897-1911 are: angioma serpiginosum, 3 cases; porokeratosis, 7; pemphigus vegetans, 17; blastomycosis, 18; rhinoscleroma, 28; angiokeratoma, 34; pityriasis rubra of Hebra, 45; urticaria pigmentosa, 47; xeroderma pigmentosum, 50; lichen scrofulosorum, 5; pityriasis rubra pilaris, 99 (in addition to 49 cases reported as lichen ruber acuminatus); granuloma fungoides, 126; morphœa, 164;

TUBERCULOSIS AND CANCER CASES PER 10,000

TUBERCULOSIS MEAN = 52.7 per 10,000
 MINIMUM = 13.2 per 10,000 in 1885
 MAXIMUM = 32 per 10,000 in 1911

CANCER MEAN = 12.4 per 10,000
 MINIMUM = 2.2 per 10,000 in 1903
 MAXIMUM = 43.9 per 10,000 in 1916



and scleroderma, 201. Pemphigus was noted 246 times, equivalent to 1 case in 1,500; prurigo, the occurrence of which in America was doubted within the memory of our older members, was observed 485 times, equivalent to 1 in 750; ichthyosis, 550 cases (1:660); and dermatitis herpetiformis, 724 cases (1:500). Lichen planus and pityriasis rosea occurred in almost identical proportions, 1,771 cases of the former and 1,795 cases of the latter (about $\frac{1}{2}$ of one per cent. of all dermatoses) having been reported.

In studying the variations in the ratios of different dermatoses as they occur from year to year, the Committee has selected a few diseases as of special interest: syphilis, scabies, the tuberculoses and the cancerous affections.

Approximately 10 per cent. of all cases seen by members of the Association are syphilis. The few marked deviations from this mean as recorded in the different years, while considerable, are of such an erratic character that we are unable to base any conclusions on them (see chart, p. 315). Why at three different periods, 1878, 1883 and 1892, the syphilis ratio reached the low figure of about $6\frac{1}{2}\%$, being preceded or followed in each case by a ratio considerably above the mean, seems inexplicable except on the theory that there was a partial transference of cases from one year to another. In estimating averages mathematicians are in the habit of omitting extremes, and if we disregard figures we find that the curve shows a fairly constant ratio of between 9 and 11 per cent. It is to be regretted that the collection of these statistics terminated with the year 1911; the ascending curve shown during that year possibly reflects the great increase in the number of syphilitics who have sought expert aid under the stimulus supplied by the recent general awakening to the importance of this disease. Is it too much to hope that the wider public discussion of syphilis, together with our vastly improved methods of diagnosis and treatment, will result in a measurable time in a greatly diminished incidence of this terrible disease? The statistical reports of this Association in a few decades will tell the tale.

Unlike syphilis, the variations in the ratio of cases of scabies from year to year seem to have some significance. Regarding the curve (p. 315) a little broadly, the cases of scabies increased in number during the first decade of our reports, reaching a maximum of over 6% of all cases seen in the year 1888. Thence the ratio decreased during the succeeding eight years to 2.5%, in 1896, and remained at about that figure till 1901. During the next four years the number increased rapidly till 1905, when nearly 10% of all cases seen were scabies. In that year scabies ranked second in number among the dermatoses reported, syphilis being relegated to third place. From this high point in 1905, the curve slowly declined during the next six years, terminating in 1911 at 5%, almost exactly the mean figure for the entire period of 34 years.

The first rise in the scabies curve during the ninth decade of the last century may possibly be explained as due to two factors. There can be

no doubt that scabies was a rare disease in this country at the time of the first meeting of the Association in 1876. Many of the founders of this Association had studied abroad, notably in Vienna, and were acquainted with this disease. The failure to record a single case of scabies in the first annual statistical report reflects the undoubted rarity of this disease at that time. During the succeeding ten years the wave of immigration from central Europe brought many cases of this disease to this country, and at the same time our members became better acquainted with its symptomatology. The decrease in the curve during the last decade in the century is not easy to explain; but if we neglect the unprecedentedly high figures of the years 1903 to 1908, the low figures of 1896 to 1901 are not materially below the corrected mean. For during the years 1903 to 1908 we undoubtedly were dealing with abnormal conditions in regard to scabies. There was during those years a veritable epidemic of scabies throughout this country. The factors that led to this condition can of course be only a matter of surmise, but we have a possible explanation in the great movements of large bodies of our population incident to the Spanish War and the return of the troops during the succeeding years 1900 to 1903, the Buffalo Exposition in 1902 and the St. Louis Exposition in 1904. At the present time (1913) scabies seems to occur in about its normal ratio, approximately 4 per cent.

Similar charts for favus and trichophytoses were prepared by the Committee, but the annual variations for these diseases present nothing of importance; the deviations from the mean are not large and seem to be without significance.

The number of cases of tuberculosis of the skin and of the cancerous diseases reported by the members of the Association is not great. For tuberculosis, including lupus, tuberculosis verrucosa cutis and scrofuloderma, the mean for 34 years is about 6 pro mille, and for cancer (and epithelioma) about 13 pro mille. Beginning at about the same figures in 1877-78 (about 4.5 pro m.), there was an increase in the number of both diseases to about 13 to 14 pro mille in the years 1884 and 1885 (see p. 315). Tuberculosis never again reached so high a figure. From that year (1885) the ratio of tuberculosis has almost constantly declined. Since 1902 the ratio has never once attained the mean for the entire period. Cancer, on the other hand, has been reported with increasing frequency. The curve for cancer and tuberculosis parted company in 1888, and while tuberculosis has been almost steadily declining, cancer has been increasing; since 1901 the number of cases has constantly been above the average for the whole period. The increase in the incidence of the cancers becomes even more striking if we consider the cases in larger groups of years. Dividing our period of 34 years into three periods of 14, 10 and 10 years respectively, we find during the first period of 14 years an average of 87 cases per 10,000 patients; during the second period of 10 years, an average of 109 cases per 10,000; and during the last period of 10 years an average of 190 cases per 10,000. That is, the in-

idence of cancer has more than doubled in the last period as compared with the first. These figures are presented without further discussion; the question of the increased incidence of cancer in general is just at present a subject of wide interest and great difference of opinion.

In conclusion, the Committee begs to remind the members of the Association that the same Resolution which terminated the collection of annual reports provided for a report for every fifth year. It is hoped that these quinquennial reports will prove of value in affording a sufficient purview of the changes in the relative proportions of dermatoses in the coming decades. The Committee at a future meeting will offer some suggestions for modifying the details of the statistical reports to be made hereafter, with a view to enhancing the value of these reports in some directions and avoiding the unnecessary reiteration of facts concerning the common dermatoses which the records of 34 years have sufficiently established.

STATISTICAL REPORT

OF THE

AMERICAN DERMATOLOGICAL ASSOCIATION.

(Provisional nomenclature).

Showing the total number of all cases reported for the 34 years ending Dec. 31, 1911, and also the total number of cases reported for 14 years, Jan. 1, 1898, to Dec. 31, 1911. Titles added since 1897 are printed *in italics*.

	1878 to 1911 (inclusive.)		1898 to 1911 (inclusive.)	
	Total.	Per cent.	Total.	Per cent.
<i>Acanthosis Nigricans</i>	33	0.005	33	0.0089
<i>Acne Varioliformis</i>	262	0.038	262	0.0707
<i>Acne Vulgaris</i>	53322	7.841	27999	7.5597
<i>Acrodydia</i>	3	0.0004	3	0.0008
<i>Actinomyces</i>	31	0.004	28	0.0076
<i>Adenoma Sebaceum</i>	155	0.023	155	0.0418
<i>Adenoma Sudoriparum</i>	3	0.0004	3	0.0008
<i>Ainhum</i>	4	0.0006	4	0.001
<i>Albinismus</i> (a) <i>generalis</i>	37	0.005	10	0.0027
(b) <i>localis</i>	60	0.009	60	0.0162
<i>Alopecia</i>	15273	2.246	9288	2.5078
<i>Alopecia Areata</i>	5564	0.818	3249	0.8772
<i>Anæsthesia</i>	56	0.082	25	0.0067
<i>Angio-keratoma</i>	34	0.005	34	0.0092
<i>Angioma</i>	1724	0.253	724	0.1955
<i>Angioma Cavernosum</i>	80	0.012	40	0.0108
<i>Angioma Serpiginosum</i>	3	0.0004	3	0.0008
<i>Anidrosis</i>	84	0.012	42	0.0113
<i>Anthrax</i>	195	0.029	13	0.0035
<i>Asphyxia Localis</i> (<i>Raynaud's disease</i>)	94	0.014	94	0.0254
<i>Atheroma</i> (<i>Wen</i>)	754	0.109	754	0.2036

	1878 to 1911 (inclusive.)		1898 to 1911 (inclusive.)	
	Total.	Per cent.	Total.	Per cent.
Atrophia Maculosa et Striata	164	0.024	58	0.0157
Atrophia Pilorum Propria	90	0.013	52	0.014
Atrophia Senilis	175	0.026	122	0.0329
Atrophia Unguis	224	0.033	91	0.0246
<i>Atrophoderma Symmetricale</i>	15	0.002	15	0.004
<i>Blastomycosis</i>	118	0.017	118	0.0319
Bromidrosis	519	0.076	212	0.0653
Callositas	1084	0.159	681	0.1839
Canities	370	0.054	220	0.0594
Carbunculus	1152	0.169	685	0.1849
Carcinoma	2562	0.377	781	0.2109
Cellulitis (phlegmona diffusa)	891	0.131	484	0.1307
<i>Cheilitis</i>	44	0.006	44	0.0119
Chloasma	2491	0.366	1186	0.3202
Chromidrosis	65	0.009	37	0.0099
Cicatrix	711	0.146	490	0.1323
Clavus	1097	0.161	561	0.1515
Comedo	5772	0.849	3089	0.834
<i>Condyloma Acuminatum</i>	559	0.082	559	0.1509
Cornu	174	0.025	81	0.0219
Cystus	581	0.089	169	0.0456
Dermatalgia	543	0.08	508	0.1372
<i>Dermatitis Actinica</i> (radio-dermatitis)	321	0.047	321	0.0867
Dermatitis Calorica	3913	0.443	2860	0.7722
Dermatitis Exfoliativa	452	0.066	291	0.0786
<i>Dermatitis Factitia</i>	280	0.041	280	0.0756
Dermatitis Gangrenosa	282	0.041	159	0.0429
Dermatitis Herpetiformis	1104	0.162	724	0.1953
Dermatitis Medicamentosa	2566	0.377	1723	0.4652
Dermatitis Papillaris Capillitii	149	0.022	118	0.0319
<i>Dermatitis Repens</i>	106	0.016	106	0.0286
Dermatitis Traumatica	3739	0.55	2139	0.5775
Dermatitis Venenata	11517	1.694	8848	2.3889
Ecthyma	2652	0.39	1261	0.3405
Eczema	153083	22.512	68808	18.5782
<i>Eczema Seborrhœicum</i>	7628	1.122	7628	2.0596
Elephantiasis	202	0.03	82	0.0221
Epithelioma	6206	0.914	5165	1.3945
<i>Epithelioma Multiplex, Benign Cystic</i>	50	0.007	50	0.0135
Equinia (glanders)	5	0.0007	3	0.0008
Erysipelas	4131	0.607	1760	0.4752
<i>Erysipeloid</i>	223	0.032	223	0.0602
<i>Erythema Induratum Scrofulosarum</i> ..	100	0.015	100	0.027
Erythema Multiforme	4180	0.615	2239	0.6045
Erythema Nodosum	834	0.123	444	0.1199
<i>Erythema Scarletiniforme</i>	119	0.017	119	0.0321
Erythema Toxicum	3217	0.473	770	0.2079
Erythrasma	173	0.025	144	0.0381
Fibroma	616	0.09	336	0.0907
<i>Folliculitis</i>	897	0.132	897	0.2422
<i>Folliculitis Decalvans</i>	132	0.019	132	0.0356
Fraumbœsia (yaws)	28	0.011	2	0.0005
Furunculus	14841	1.737	6837	1.846

	1878 to 1911 (inclusive.)		1898 to 1911 (inclusive.)	
	Total.	Per cent.	Total.	Per cent.
<i>Granuloma Coccidioides</i>	4	0.0006	4	0.0011
<i>Granuloma Fungoides</i>	151	0.022	126	0.034
<i>Herpes Simplex</i>	6744	0.992	2803	0.7568
<i>Herpes Zoster</i>	6783	0.997	3473	0.9377
<i>Hidradenitis Suppurativa</i>	49	0.007	49	0.0132
<i>Hidroa Vacciniiforme</i>	66	0.01	66	0.0178
<i>Hidrocystoma</i>	90	0.013	90	0.0243
<i>Hyperæsthesia</i>	181	0.026	103	0.0278
<i>Hyperidrosis</i>	2499	0.3675	1521	0.4107
<i>Hypertrichosis</i>	4055	0.596	2336	0.6307
<i>Ichthyosis</i>	1184	0.174	559	0.1509
<i>Ichthyosis Congenita</i>	63	0.009	41	0.0111
<i>Icterus</i>	81	0.012	81	0.0219
<i>Impetigo</i>	26417	3.885	19135	5.1664
<i>Impetigo Herpetiformis</i>	30	0.004	11	0.0029
<i>Intertrigo</i>	891	0.131	891	0.2405
<i>Keloid</i>	982	0.144	626	0.169
<i>Keratodermia</i>	75	0.011	75	0.0202
<i>Keratosis Follicularis</i>	160	0.023	105	0.0283
<i>Keratosis Palmaris et Plantaris</i>	278	0.041	278	0.0751
<i>Keratosis Pilaris</i>	921	0.135	433	0.1169
<i>Keratosis Senilis</i>	1301	0.191	881	0.2379
<i>Kraurosis</i>	39	0.006	39	0.0105
<i>Lentigo</i>	754	0.109	319	0.0861
<i>Lepothrix</i>	12	0.002	12	0.0032
<i>Lepra</i>	229	0.034	131	0.0353
<i>Leuconychia</i>	43	0.006	43	0.0116
<i>Lichen Planus</i>	2689	0.395	1771	0.4782
<i>Lichen Ruber</i>	111	0.016	49	0.0132
<i>Lichen Scrofulosorum</i>	54	0.008	54	0.0146
<i>Lipoma</i>	195	0.029	112	0.0302
<i>Lupus Erythematosus</i>	2579	0.379	1320	0.3564
<i>Lymphangiectasis</i>	18	0.003	18	0.0049
<i>Lymphangioma</i>	108	0.016	44	0.0119
<i>Lymphangioma Circumscriptum</i>	24	0.003	24	0.0065
<i>Lymphangitis</i>	221	0.032	221	0.0597
<i>Melanodermia</i>	39	0.006	39	0.0105
<i>Miliaria (Prickly Heat)</i>	1723	0.253	1442	0.3893
<i>Milium</i>	1110	0.162	505	0.1363
<i>Molluscum Contagiosum</i>	1099	0.162	587	0.1584
<i>Monilethrix</i>	7	0.001	7	0.0018
<i>Morbilli</i>	742	0.109	468	0.1264
<i>Morbus Addisonii</i>	13	0.002	13	0.0035
<i>Morpheæa</i>	281	0.041	164	0.0443
<i>Myectoma</i>	1	0.0001	1	0.0003
<i>Myoma</i>	9	0.001	5	0.0013
<i>Myxædema</i>	31	0.004	18	0.0049
<i>Nævus Fibrosus</i>	247	0.036	203	0.0548
<i>Nævus Linearis</i>	39	0.006	39	0.0105
<i>Nævus Lipomatodes</i>	10	0.001	10	0.0027
<i>Nævus Papillaris</i>	89	0.013	89	0.024
<i>Nævus Pigmentosus</i>	1435	0.211	911	0.246
<i>Nævus Pilosus</i>	351	0.052	264	0.0713

	1878 to 1911 (inclusive.)		1898 to 1911 (inclusive.)	
	Total.	Per cent.	Total.	Per cent.
Nævus Vascularis	1334	0.225	1204	0.325
Neuroma	65	0.009	39	0.0105
Œdema Circumscriptum Acutum	466	0.068	348	0.094
Onychauxis	379	0.056	127	0.3429
Onychia	381	0.056	381	0.1029
Pachydermatocele (Dermatolysis)	22	0.003	9	0.0024
Papilloma	303	0.044	303	0.0819
Paronychia	794	0.117	794	0.2144
Pediculosis Capillitii	14938	2.197	8687	2.3455
Pediculosis Corporis	6518	0.929	2835	0.7654
Pediculosis Pubis	1900	0.279	996	0.2689
Pellagra	20	0.003	20	0.0054
Pemphigus	629	0.092	246	0.0664
<i>Pemphigus Vegetans</i>	17	0.0025	17	0.0046
Pernio	518	0.076	518	0.1399
Pityriasis Rosea	2395	0.352	1795	0.1846
Pityriasis Rubra	132	0.019	45	0.0121
Pityriasis Rubra Pilaris	124	0.018	99	0.0267
<i>Pityriasis Simplex</i>	224	0.033	224	0.0605
<i>Porokeratosis</i>	7	0.001	7	0.0019
Pompholyx	1168	0.172	1058	0.2857
<i>Prurigo</i>	495	0.073	495	0.1336
Pruritus	11299	1.662	5264	1.4213
Psoriasis	19517	2.864	9817	2.6506
Purpura	1615	0.237	868	0.2344
Rhinoscleroma	37	0.005	28	0.0076
Rosacea	10053	1.478	5509	1.4874
Rubella (Rötheln)	447	0.066	327	0.0883
Sarcoma	338	0.056	178	0.0481
Scabies	33563	4.936	22003	5.9408
Scarlatina	551	0.081	400	0.0108
Sclerema Neonatorum	5	0.0007	3	0.0008
Scleroderma	333	0.049	201	0.0543
Scrofuloderma	1816	0.267	469	0.1266
Seborrhœa	19071	2.804	6859	1.8519
<i>Staphylococcia</i>	1694	0.249	1694	0.1574
Sudamina	703	0.103	161	0.0435
<i>Sycosis Lupoides</i>	49	0.007	49	0.0132
Sycosis Vulgaris	3744	0.556	2184	0.5897
Syphiloderma	68949	10.139	34973	9.4427
<i>Syringo-myelia</i>	21	0.003	21	0.0057
<i>Telangiectasis</i>	487	0.072	487	0.1315
Tinea Favosa	2040	0.300	978	0.2641
Tinea Tricophytina	6120	0.900	1767	0.4771
a. Circinata (corporis)	6068	0.878	3900	1.053
b. Tonsurans (capitis)	7235	1.064	4721	1.2747
c. Sycosis (barbæ)	2501	0.368	1275	0.3442
Tinea Versicolor	5936	0.873	2761	0.7455
Trichorrexia	48	0.007	30	0.0081
Tuberculosis	439	0.064	439	0.1185
Lupus Vulgaris	1970	0.29	869	0.2346
<i>Tuberculosis Verrucosa</i>	233	0.034	233	0.0629
Ulcus	6150	0.904	6150	1.6605

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	1878 to 1911 (inclusive.)		1898 to 1911 (inclusive.)	
	Total.	Per cent.	Total.	Per cent.
<i>Ulcus Molle</i>	2206	0.324	2206	0.5956
Uridrosis	17	0.0025	1	0.0003
Urticaria	20097	2.955	11549	3.1182
Urticaria Pigmentosa	99	0.014	47	0.0127
Vaccinia	730	0.173	625	0.1687
Varicella	2320	0.341	1897	0.5122
Variola	1046	0.154	980	0.2646
Verruca	7202	1.059	4160	1.1232
Vitiligo	1702	0.253	929	0.2508
Xanthoma	558	0.082	341	0.0921
Xeroderma Pigmentosum	54	0.008	50	0.0135
Xerosis	538	0.079	287	0.0775
Unclassified	10856	1.596	1762	0.4757
Total	679,376		369,970	

REVIEW

OF

DERMATOLOGY AND SYPHILIS.

Under the direction of

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AMERICAN JOURNAL OF DISEASES OF CHILDREN.

(August, 1913, vi, No. 2.)

Abstracted by HARVEY PARKER TOWLE, M.D.

ANALYSIS OF ONE THOUSAND CASES OF EPIDEMIC MEASLES.

C. M. CRASTER, p. 122.

Dr. Craster states as a truism that "the number of cases among a susceptible community and the severity of the symptoms move in a kind of arithmetical progression with the sum of the conditions which produce ill-health."

The incidence of the disease was the greatest during this epidemic, in December, April, May and June, nearly one-half of the total cases occurring in the last three months. The sexes were almost equally affected. The most susceptible ages were, in order, three, two and one. The number of cases in patients less than one year old was unusually high. Sixty of the patients were under three years old; 495 cases developed otitis media, 353 of them in both ears; 51.2% of the patients two years old, and 52.89% of the patients three years old, developed this aural complication. Although the tympani might be red in the first week, as a rule it was ten or twelve days before there were signs of pus; 20.4% developed bronchopneumonia which, together with enteritis, caused a mortality of 23.3%. Forty-eight cases developed mastoiditis, 8 of which were double; 47 were operative cases. Seven cases developed acute nephritis, usually between the twentieth and thirtieth days of the disease. There were three cases of noma and two of tonsillar abscesses. Fifty had vaginitis, of which several cases ended fatally. The statistics of fever and mortality showed that the latter increased proportionately with the severity of the former. The total mortality was 16.7%. The highest monthly mortality, 25.2%, the month January. The most frequent complication was otitis media and the most common causes of death bronchopneumonia and enteritis.

(*Ibidem*, September, 1913, vi, No. 3.)

RESULTS OF TREATMENT WITH SALVARSAN IN LATE CONGENITAL SYPHILIS. G. S. STRATHY and G. A. CAMPBELL, p. 187.

The writers treated with salvarsan 18 cases, most of which had bone lesions. Ordinarily, the injection was made into the median basilic or median cephalic vein, occasionally into the external jugular. At first the treatment was given once a month but later it was repeated every one or two weeks. The blood serum was tested within 48 to 72 hours after the injection. No result was considered finally negative unless given by blood taken within this period. They agree with McDonagh as to the provocative power of salvarsan. For each pound of body weight, they gave a dose of 1 cc. of a salvarsan solution of 0.6 gm. in 300 cc. and 2 cc. of neosalvarsan solution of 0.9 gm. in 150 cc.

The effect upon the Wassermann reaction was not satisfactory, although comparable with that obtained with mercury. Gummata, periostitis and ulcers disappeared rapidly. Interstitial keratitis healed more quickly than under mixed treatment and, therefore, with less scarring. The results were better than with mercury, about one-half the cases being mercury resistant. Hereafter, they will use larger doses of salvarsan even to the limit of tolerance and repeat the dose at intervals of less than seven days. The Wassermann reaction became negative in only two cases although all improved clinically. In their experience, they found that the younger the child, the more rapid the effect upon the Wassermann reaction.

A STUDY OF THE WASSERMANN REACTION IN ONE HUNDRED INFANTS. K. D. BLACKMAN, S. T. NICHOLSON, JR., and F. W. WHITE, p. 162.

Churchill reported that a positive serum reaction was present in 39 of 101 children examined. For comparison, the writers also tested 101 children, taken in order, without regard to the diagnosis of their affections. In contrast to Churchill's experience, the writers obtained but two positive results in their series of 101 cases.

It is their belief that a positive serum test must be accepted as a positive indication of syphilitic disease even if confirmation is lacking. Not to accept the evidence as sufficient, they say, would be an "admission of doubt as to the specificity of the complement-fixation test or as an acknowledgment of some error in technique." In the paragraph which follows are found these seeming qualifications.

"Several factors concerning the complement fixation test should be kept in mind as a possible explanation for such wide variation" (between their figures and Churchill's), "viz, the hypersensitiveness of the Noguchi as compared to the Wassermann technique; the personal element present in the interpretation of the reaction and the possibility of error in technique."

One of their final conclusions is that small series from different sources give widely divergent results.

DYSPITUITARISM. MARK S. REUBEN, p. 145.

Dr. Reuben gives a list of symptoms, the presence of which in any case, he says, should excite suspicion of a disturbance in the ductless gland system. The attention of the dermatologist will be particularly attracted by the inclusion among these suspicious symptoms of hyper- and hypo- trichosis and pigmentation of the skin.

In addition to the effect upon other organs of hyperpituitarism of the anterior lobe, the writer summarizes the changes in the skin. There is said to be a hypertrophic alteration of the skin, an increase in the size of hair follicles, hypertrophy of the papillæ and activation of the secretory glands so that the skin becomes greasy and moist and the hypertrichosis pronounced. A deficiency of the posterior lobe is marked, so far as the skin alone is concerned, by a smoothness which may even suggest an œdema but which does not pit. The hair on the scalp may be abundant but entirely absent from the pubes and axillæ. The nails are often small and with no crescent at the base.

RESULTS WITH SALVARSAN IN HEREDITARY SYPHILIS. L. EMMET HOLT and ALAN BROWN, p. 174.

At first, the injection was given intravenously at the bend of the elbow. This method was found so troublesome that, in later cases, it was made into the external jugular or, in fat infants, into the posterior auricular or a branch of the temporal vein. The dosage was 0.05 gm. salvarsan or 0.075 gm. neosalvarsan in infants up to 8 months of age; 0.1-0.2 gm. of salvarsan or 0.15 to 0.30 gm. of neosalvarsan in older children. The patients were usually kept in the hospital for three or four days. After salvarsan, the spirochætæ disappeared in from one to thirteen days, on an average, in four and one-half days. The Wassermann reaction disappeared in from two to nine and one-half months. The average time was three and one-half months.

The conclusions are, that salvarsan is of immediate and striking benefit in hereditary syphilis, often after mercury has failed; that it must be given intravenously; that a single dose does not cure although it may remove the visible symptoms. Present experience teaches that it is advisable to repeat the injections at intervals for a year; that, in hereditary syphilis, the best results are undoubtedly obtained when salvarsan is given early and is followed by mercury; that even then, notwithstanding the evidence of the Wassermann reaction, it is difficult to say when hereditary syphilis is actually cured.

THE LUETIN REACTION IN INFANCY. ALAN BROWN, p. 171.

In 1911, Noguchi produced the test substance, luetin, from pure cultures of numerous strains of the pallida grown on solid media and ground in a mortar. It is claimed that in syphilis the luetin reaction is specific in the presence not only of the products of active organisms, but also of their metabolic processes.

Brown tested 134 infants, of whom 100 were used as controls; 34 were clinically syphilitic. Of these, 30 reacted positively to luetin. The results were paralleled by the results of the Wassermann test.

THE WASSERMANN REACTION IN HEREDITARY SYPHILIS, IN CONGENITAL DEFORMITIES AND IN VARIOUS OTHER CONDITIONS IN INFANCY. L. EMMET HOLT, p. 166.

The following sentences are taken from the earlier portion of Professor Holt's paper, in order. "It is the consensus of opinion at present that latent as well as active syphilis gives a positive response to this test." "It is also the general opinion that children who react positively should receive the benefit of antisyphilitic treatment." Discussing the fallibility of the test, Dr. Holt says further on, "Errors due to faulty technique must also be taken into account. These are much more common and *are almost always on the positive side*, so that the children tested are *pronounced syphilitic when they are not so*." There is certainly a suggestion of conflict here.

Dr. Holt's investigations were undertaken "to answer the question as to the frequency of active or latent syphilis in the ordinary run of hospital infants as well as in some special conditions, particularly congenital deformities." The Noguchi modification of the Wassermann was always used. Except for the last 17, every test was performed by an assistant of Dr. Noguchi and under his personal supervision, which is, of course, an assurance of accuracy.

Thirty-one cases of hereditary syphilis gave 30 positive results. The one exception occurred in an infant 5 months old, who had been treated by mercurial inunctions for 3 months preceding the test. Mercury does not seem to affect the reaction, according to Dr. Holt, unless it has been used with regularity, for a considerable length of time. In proof, Dr. Holt cites 9 cases which had received mercurial treatment, in many instances for months, but never continuously for long periods. On the basis of the Wassermann reaction, these cases, says Dr. Holt, show how uncertain mercury and the iodides are in the cure of syphilis.

Tests were made of 178 children who were clinically not syphilitic although some were suspected. Eleven cases without visible signs gave positive reactions. Five cases came to autopsy. Four were proved syphilitic. In one case, not the slightest evidence of syphilis could be discovered in any direction. A child, admitted for convulsions of unknown origin, reacted positively. None of the symptoms in the case suggested syphilis. Both parents gave a negative reaction.

Of 167 children giving a negative reaction, 12 cases came to autopsy. None showed lesions suggestive of syphilis.

Fifty-six of this group of negative cases were children with malformations or congenital deformities such as are frequently ascribed to the effects of syphilis. Not a single case responded positively to the Wassermann test.

From his observations, Dr. Holt draws the very important conclusion that a mere swelling of the liver or of the spleen, even when associated, is not a very important sign of syphilis in infants suffering from malnutrition. "Both are much more likely to be seen with rickets than with syphilis." The only glandular enlargements of significance are of the epitrochlear glands with no peripheral lesions present to account for them.

ANNALES DE L'INSTITUT PASTEUR.

(June, 1913, xxvii, No. 6.)

Abstracted by R. C. JAMIESON, M.D.

A CASE OF SYPHILITIC GUMMA IN THE NEW BORN. C. SAUVAGE and LOUIS GERY, p. 489.

The authors found treponemata abundantly in the gumma and not in the organs which usually contain them. Treponemata were in the blood and were

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shown abundantly in a general pemphigus, visceral lesions, gummata and hepatization of the liver and lungs and splenomegaly.

Usually the intensity of the inflammatory lesions is in inverse ratio to the severity of the disease, but in this case either lowered virulence of the treponemata or a relative resistance had caused the disease to become localized, as acquired syphilis does. This case is akin to acquired, precocious, malignant syphilis, but is a relatively benign, comparatively common form of heredo-syphilis.

JOURNAL OF TROPICAL MEDICINE AND HYGIENE.

(September 15, 1913, xvi, No. 18.)

Abstracted by R. C. JAMIESON, M.D.

THE PROBABLE IDENTITY OF PELLAGRA AND SPRUE. CHARLES E. STEWART, p. 287.

Stewart considers, on account of the improvement and results obtained with the same diet in pellagra and sprue, that they may be of the same origin. There are cases of pellagra without the skin eruption, and there have been recorded cases of sprue with cutaneous manifestations similar to a typical pellagra, these facts tending to show the possible identity of the two diseases.

(*Ibidem*, Oct. 1, 1913, xvi, No. 19.)

ACQUISITION OF ACID-FAST PROPERTIES BY A FILAMENTARY ORGANISM CULTIVATED FROM AN ANIMAL INJECTED WITH A CULTURE OF HANSEN'S "BACILLUS." J. MARTINEZ SANTAMARIA, p. 301.

From experiments in this work, the author considers that it is shown, for the first time, how a non-acid-fast filamentary organism may change to an acid-fast bacillus. He thinks that the failure to grow the organism of leprosy was due to the fact that these filamentary organisms were considered contaminations, and were cast aside.

AMERICAN JOURNAL OF THE MEDICAL SCIENCES.

(December, 1913, cxlvi, No. 6.)

Abstracted by R. C. JAMIESON, M.D.

CUTANEOUS MANIFESTATIONS OF SEPTICÆMIA. JOHN W. CHURCHMAN, p. 833.

Churchman briefly mentions the lesions that may follow a bacterial invasion of the blood, including the erythemata, papular and urticarial rashes, hæmorrhages, vesicles, pustules and pemphigoid eruptions.

JOURNAL OF EXPERIMENTAL MEDICINE.

(July, 1913, xviii, No. 1.)

Abstracted by R. C. JAMIESON, M.D.

CONCERNING AGGLUTININS FOR *TREPONEMA PALLIDUM*. JOHN A. KOLMER, p. 18.

Kolmer's work can be best summed up in his own conclusions:

1. There is no demonstrable amount of agglutinins for *treponema pallidum* in normal human and normal rabbit serum in dilutions as low as 1:20.
2. Agglutinins for *treponema pallidum* are readily produced in young rabbits by the administration of pure cultures of living spirochaetæ.
3. There is no appreciable amount of agglutinin for *treponema pallidum* culture used in the sera of secondary and tertiary syphilites, or in the cerebrospinal fluid of tertiary syphilis, in dilutions of 1:20 to 1:640.

A STUDY OF THE ADDITION OF CHOLESTERIN TO THE ALCOHOLIC EXTRACT OF TISSUES USED FOR ANTIGENS IN THE WAS-
SERMANN REACTION. I. C. WALKER and H. F. SWIFT, p. 75.

The authors found that the antigenic value of alcoholic extract of heart or foetal liver was increased by the addition of cholesterin, the best amount being .4%. The cholesterin heart extracts are superior to other extracts of liver and heart, but extracts prepared from different human hearts have the same antigenic value. In the blood-serum work, they used a 1 to 10 emulsion of the cholesterin heart extract, and in working with cerebrospinal fluid this dilution gave better results than 1 to 6. They consider that it meets all requirements of a standard antigen.

(*Ibidem*, October, 1913, xviii, No. 3.)

A STUDY OF THE SPIROCHLETICIDAL ACTION OF THE SERUM OF
PATIENTS TREATED WITH SALVARSAN. H. F. SWIFT and
A. W. M. ELLIS, p. 435.

In this work Swift and Ellis used the serum of rabbits and humans and the spirochæte Duttoni, cultivated in white mice. They state that the serum has a definite spirochæticidal action, which is more pronounced on being heated to 56.0 C. for thirty minutes.

In human cases the serum obtained immediately after injection had the same action as that obtained one hour later, but the former was more active after heating than the latter. This increased action they believe to be due to the destruction of some inhibitory substance found in normal serum, and also to the direct effect of the heat. They did not find any inhibitory substance in the cerebrospinal fluid.

THE EFFECT OF INTRASPINOUS INJECTIONS OF SALVARSAN AND
NEOSALVARSAN IN MONKEYS. A. W. M. ELLIS and H. F.
SWIFT, p. 428.

In spite of the irritant action of salvarsan, Ellis and Swift used minute quantities of the drug in their work, 1 cc. of the alkaline solution in .9% sodium chloride and .6 of 1 cc. of human or monkey serum. The same was used for neosalvarsan, and two monkeys were given the solution without the serum.

The results were judged by the cell count, normal varying from 3 to 137 per cubic millimetre. Following injection, the count varied as greatly, even up to 4,082 per cubic millimetre. Even minute quantities were irritating, one milligram or over producing a cell count of over 1,000 per cubic millimetre and even .2 milligram produced a profound cellular reaction. Neosalvarsan produced a less profound reaction, as a rule.

They consider that there is too much risk of causing injury to attempt spinal treatment by injections of salvarsan or neosalvarsan.

LO SPERIMENTALE.

(May 23, 1913, lxvii, No. 2.)

Abstracted by A. RAVOGLI, M.D.

CONTRIBUTION TO THE STUDY OF THE RHAGIOCRINE CELLS. AL- BINO RUFFO, p. 169.

The author states that on account of the advances in staining technique, the connective tissue has been thoroughly studied, and it has been found that it not only performs a simple mechanical function in the organism, but that it has great importance in the biochemical processes. The polymorphism of its elements is in relation with the functions and with the phases of evolution.

The author refers to the studies of Renaut, who found that in the connective tissue there are fixed cells, which, in their secretory activity, form fatty substances, and others which produce albuminoids and granules, which are found in the protoplasm, circumscribed by a special fluid, which is intensely stained by neutral red. By injections into the connective tissue with a mild solution of this neutral red, cells appear, which he called rhagiocrine, to be distinguished from the lypocrine, which have their origin from the fatty vesicle.

With this method of staining with a solution of neutral red, the granular cells of Ehrlich (Mastzellen) are quite apparent, as accumulations of small granules. These granular cells are found mostly near the blood vessels. They are classed together with the cells of Ehrlich and with the clasmatocytes of Ranvier. They are endowed with a secretory faculty and are able to change the nutritious materials furnished by the serum of the blood into substances of a peculiar nature. They act in the same way as the fatty cells which produce fatty globules, and the pigmentary cells which produce pigment. The pericellular granules are to be considered as the product of the rhagiocrine cells, and these have to be considered as true glandular cells. It seems that the same glands have also phagocytic action, which has been proved by introducing colored powders into an irritated peritoneum.

The author thinks that the cells of Ehrlich represent a stage of cellular quiescence, while the clasmatocytes are the same, but in a different functional activity. The rhagiocrine cells of Renaut have characters and a morphology of their own; they are flat, with expansions and elongations which anastomose among themselves. The author is not inclined to consider these cells as special elements, but he believes that there is an intimate relation between the mast cells, the clasmatocytes and the rhagiocrine cells. Each one of these types of cells depends upon the others, the rhagiocrine cells being the earliest stage of the others (as in an embryonal stage) while the cells of Ehrlich would represent the stage of maturity. They probably are not produced by the elements of the blood or of the lymph, but they may have a proper histogenic origin, being subject to a special evolution in the normal tissues, as well as in the tissues affected by inflammatory processes.

REVISTA CLINICA DE MADRID.

(July 15, 1913, v, No. 14.)

Abstracted by A. RAVOGLI, M.D.

ULCERATIVE LESIONS FEIGNED BY A HYSTERICAL WOMAN. J. DE AZUA, p. 41.

When some peculiar lesions occur, which are isolated, and in peculiar regions, malingering should be suspected. A young lady was taken to the clinic of the author, showing ulcerations of the hands, face, palate, forearms and legs. The patient stated that the lesions started as bullæ and then ulcerated. She had some anæsthetic spots on different regions of the body. On close examination, the ulcerated places looked a great deal like burns, and their angular type showed that they were produced artificially. The strict supervision of the patient resulted in the healing of all the ulcerated places.

DERMITIS STAPHYLOCOCCICA POLYMORPHA GANGRÆNOSA. ALVAREZ SAINZ DE AJA, p. 49.

The author reports a case of pustular eruption in a child 5 days old, his mother suffering with suppurative acute mastitis. The pustular eruption, on many regions of the body of the child, produced large gangrænous spots, with furuncles and subcutaneous abscesses. The case was one of dermatitis gangrænosa multiplex of infants. From the laboratory examination it was found that the *Staphylococcus aureus* was the dominating pathogenic element, but *Staphylococcus pyocyaneus* and streptococci were abundantly found.

The author believes that the cause was of external origin, the germs entering between the layers of the epidermis, and very likely were staphylococci which came from the mammary abscess of the mother.

LICHEN CORNEO-VERRUCOSUS HYPERTROPHICUS, CURED WITH CARBONIC ACID SNOW. ALVAREZ SAINZ DE AJA, p. 63.

The author reports a case of lichen corneo-verrucosus hypertrophicus which was not improved by the internal administration of arsenic, but the lesions were cured by the use of carbonic acid snow. In cases of generalized lichen, where it is impossible to treat every spot, he employs radio-therapy.

GIORNALE ITALIANO DELLE MALATTIE VENEREE E DELLA PELLE.

(July 10, 1913, liv, No. 3.)

Abstracted by A. RAVOGLI, M.D.

CONTRIBUTION TO THE KNOWLEDGE OF GASTRIC SYPHILIS. MARIO COPELLI, p. 289.

The author deals with the various manifestations of syphilitic disease of the stomach. In the secondary stages of the disease, the stomach may present an inflammation of the mucous membrane, with symptoms of severe gastritis. He de-

scribes cases of tertiary disease of the stomach, giving a detailed clinical history of several cases of this type, which he had had under treatment. Out of 200 cases of syphilis, gastric syphilis occurred in 3 cases, i.e., 1½%. Copelli believes, however, that the percentage of gastric syphilis is far greater than these figures would indicate and that the disease is frequently overlooked as a causative factor in various disorders of the stomach.

SYPHILITIC REINFECTION IN A SUBJECT CURED WITH SALVAR-SAN. S. PAPPAGALLO, p. 303.

A man presenting an indurated penile chancre in which the spirochætae were demonstrated, received two intravenous salvarsan injections. The chancre healed within a few days, and three months later, the Wassermann test proved to be negative. He subsequently married and became the father of a healthy child. Shortly after, he acquired another chancre in extramarital coitus and later presented a typical roseola. The spirochætae were again demonstrated in the ulcer, proving this to be a case of syphilitic reinfection.

GRANULOMATOUS AFFECTIONS OF THE SKIN OBSERVED IN TRIPOLI. P. SABELLA, p. 306.

On account of the unhygienic conditions which exist in Tripoli, certain cutaneous affections are quite virulent and widespread. Parasitic diseases are quite common. About 40% of all skin diseases are of parasitic origin, while about 15% are of pyogenic nature. Among the commoner diseases are frambæsia, phagadænic ulcer and ulcerative granuloma of the genitals. Pian is very contagious and the Bedouins are rarely free from this disease, which has a mortality of about 25%. The author urges isolation and salvarsan treatment in these cases. Granuloma ulcerosum of the genitals is frequently observed. It is a contagious affection, usually found in several members of the family at the same time. It is probably transmitted by contact and has been considered a venereal disease. It is a chronic affection, usually invading the mucous membranes of the vulva, anus and urethra; sometimes it may cause cicatricial contractions, but in general, after some years of activity, the disease disappears. Thus far, no treatment has been successful, not even curettage and the thermocautery. The X-ray has been used in Madras, apparently with good results. The author has found a kind of spirochæta in the granuloma and, guided by this circumstance, he has used salvarsan, with good results in two cases.

Syphilis is not frequent among the Bedouins and Arabs of Ferzan and of the Sudan, but it is common among those living in Tripoli itself. Cases of tuberculosis cutis verrucosa are frequent, but not so with lupus. Lepa is rare.

Sabella next discusses frambæsia, which, like syphilis, is a spirochætal infection. He finds the spirochætae in the non-ulcerated papules, in the spleen and the lymph glands. The extract from this material reproduces the disease in monkeys and when filtered, is inert. The spirochæta *pertenuis* inhabits the epidermis, while the spirochæta *pallida* is found in the derma.

Pian is not transmitted by heredity as is the case in syphilis, but the disease is easily inoculated. The initial lesion is usually extragenital. The author believes granuloma contagiosum of the genitals to be a true granuloma and though it resembles frambæsia and syphilis, it is a separate disease entity, well defined both clinically and histologically. Pian becomes generalized, while granuloma remains localized to the genitals.

A CASE OF GENERALIZED DERMATITIS EXFOLIATIVA. VINCENZO PALUMBO, p. 331.

The author discusses the views of Besnier on the generalized exfoliating erythrodermias, which he compares with Bazin's herpes exfoliante, showing the great

similarity between them. He reports the case of a patient covered with scales, who was admitted to his clinic and who, after a few weeks, died of pneumonia. On post mortem examination, the most important changes were found in the lungs, in the form of pneumonic foci with abundant exudations.

Palumbo rejects the idea of a tuberculous origin of the erythrodermias and accepts the view of Bazin that this disease must be considered as the last stage of a severe disease of toxic infectious nature.

A CASE OF NORWEGIAN SCABIES. FRANCESCO RADAMEL, p. 347.

In a poor woman in the most destitute circumstances, the whole body was covered with thick, heavy crusts, accompanied by severe itching. The microscope showed masses of epidermis filled with acari, larvæ and eggs. The author classes the parasites with *Sarcoptes hominis*. Inunctions with Helmerich's ointment, followed by that of Wilkinson, effected a cure.

TRICHOPHYTONS IN THE PROVINCE OF ROME. G. PECORI, p. 354.

Pecori states that the trichophytos are of different species, depending upon the geographical regions in which they are found to occur. The province of Rome still has a high percentage of diseases produced by the trichophyton. He divides the fungi occurring in the province into three groups: endothrix, neoendothrix and ectothrix. The trichophyton *gypseum* is the most virulent type of fungus, causing suppuration and deep forms of the disease.

RUSSKI JOORNAL KOJNIKH E VENERICHESKIKH BOLEZNEI.

(July and August, 1913, xxvi, No. 8.)

Abstracted by M. L. RAVITCH, M.D.

SCLERODERMA. ITALINSKI, p. 3.

Italinski insists that Prof. Pospelov was right in adhering to the name of *sclerema simplex*, as the condition was first named by Alibert in 1817. Thirlial and Gintrac later renamed it *scleroderma*. Italinski does not agree with the last writers, since this affection is not only of the skin but of the whole organism. In the present view, this affection is due to a fibroplastic process in which not only the skin but the connective and subcutaneous tissues, the glands, muscles, bones and internal organs are also involved.

Reviewing the different phases of *scleroderma*, he is in accord with Kaposi who always advised to retain the name of *scleroderma* as opposed to *sclerema neonatorum*. Kaposi always held that localized forms of this affection are not different from those which are diffused and extensive. Italinski claims that Pospelov often noticed *scleroderma* to be followed by idiopathic atrophy of the skin. He also noticed the appearance of this disease between the ages of 20 and 50, and oftener among women—67%.

Italinski acknowledges that the ætiology and pathogenesis of this affection are unknown. After extensive observation and study, he is of the opinion that this affection is rather a disorder of the functions of the glands. According to Polotebnev, who made extensive observations, the disease seems to be angio-tropho-neurotic. Since the ætiology is unknown, the therapy is purely symptomatic. Italinski claims good results from the use of massage and electrotherapy. While *scleroderma* and *atrophia cutis idiopathica progressiva* are two separate affections,

yet a combination of the two is cited by the author in a very interesting case, fully described and profusely illustrated. The lower part of the body illustrated a typical case of scleroderma, while the upper part of the body was a real case of atrophica cutis idiopathica progressiva. While in scleroderma the cells of the stratum corneum were preserved, in atrophica cutis progressiva, these structures, as well as the papillary layer, became atrophied. A similar combination was also observed by Prof. Pospelov.

"ECZEMA E PROFESSIONE" AND ITS THERAPY. BORUKHOVITCH, p. 11.

Borukhovitch regrets the fact that so little was written and known of this affection and less of its therapy. Referring to Jacobi's Atlas, he said that he found a picture of this disease with the title underneath, but no symptomatology or therapy were given. In Riecke's text-book, he also found a similar picture, the description of this affection being rather meagre. Mracek's Atlas has no picture, but mention of this affection is found in the general description of eczema. Other text-books, like that of Jacobi's, Unna's, Lesser's and Joseph's speak very little or not at all of this affection.

Borukhovitch concludes that the lack of description is, perhaps, due to different views held by writers in regard to this disease. He thinks that eczema e professione is rather nearer to psoriasis than to general eczema, particularly, since the same internal and external remedies that are useful in psoriasis are helpful in this affection. Beta-naphthol is recommended by the author as the most useful and active remedy for the disease.

MESOTHORIUM IN DERMATOLOGY. BOGROV, p. 24.

Bogrov, reviewing Kuznitzky's article on mesothorium, states that Kuznitzky worked in Neisser's clinic with mesothorium of 5, 10, 16 and 20 mgr., placed in capsules of 5, 10 and 20 mm. sizes. The length of the séances lasted from twenty to forty minutes, the maximum dose being two hours. The reaction in the form of an erythema took place in 1 to 2 days. Nineteen out of twenty-four cases of skin cancers resulted in a cure; two improved. He also had fair results in nævi verrucæ and lupus erythematosus. In lupus vulgaris this treatment utterly failed.

A CASE OF ANONYCHIE TOTALIS CONGENITÆ. PALDROK, p. 32.

Troitzki quotes Paldrok's interesting case. The patient, besides having lichen planus and dermatitis artificialis, had a total absence of all the nails of the fingers and toes. Atrophy of the nails, as seen in syphilis, typhus, tabes, diabetes, mechanical injury, pus processes, chronic eczema, scleroderma, psoriasis, trichophytia, favus, etc., were excluded. According to the history elicited from the patient, he was born without nails and never did have any. Hence, the author diagnosed this case "anonychie totalis congenitæ." The patient's parents, brothers and sisters and even his own children had normal nails.

NEW YORK MEDICAL JOURNAL.

(June 7, 1913, xcvi, No. 23.)

Abstracted by LOUIS CHARGIN, M.D.

CHANGES IN THE TREATMENT OF SYPHILIS. W. GOTTHEIL, p. 1170.

Gottheil considers the treatment of syphilis as modified by the newer discoveries. He deprecates the attitude of considering the Wassermann reaction as the

final and often the sole arbiter of the nature of an affection. It does not possess the absolute value of an undoubted syphilitic lesion (mucous patch, etc.). It is a symptom, and as such is at times very valuable. In the presence of definite (luetie) symptoms, the diagnosis should be made regardless of the serum test. As a guide to treatment, similar considerations hold good. A negative serum test is to some extent an evidence of the success of one's treatment, but it cannot be regarded as a safe indicator. In a large proportion of tertiary syphilitics, it seems impossible to render the reaction negative. Yet a multitude of these are practically cured, presenting no symptoms for indefinite periods and showing healthy progeny. Concerning salvarsan his observations are that it is a potent symptomatic remedy and often acts better, but sometimes less satisfactorily, than mercury. It does not cure lues any more than does mercury, probably not so well. Its introduction has not removed the necessity for full mercury and iodide courses of the usual length. Clinically, mercury does seem to cure syphilis, it is better treated by arsenic and mercury together. It cannot be cured by arsenic alone; hence the combined treatment is advocated.

A QUANTITATIVE CHEMICAL REACTION FOR THE CONTROL OF POSITIVE WASSERMANN RESULTS. (PRELIMINARY COMMUNICATION.) D. M. KAPLAN, p. 1172.

In this communication a chemical test is offered as a control of the Wassermann reaction. This test is especially useful in those cases with positive Wassermann findings that do not possess clinical signs of lues. It depends upon the fact that the amino N. in the blood serum of syphilitics is greatly reduced in quantity as compared with non-syphilitic serum. For the estimation of this N., the method of Van Slyke is made use of. Illustrating the findings, comparative tables are given which may be summarized as follows. In a series of twelve cases of syphilis with positive Wassermann reactions, the amino N. content in 100 cc. of the substance used, ranged between 0.0 and 2.263. This is compared with a group of 20 non-luetic cases with negative Wassermann reactions in which the figures ranged between 6.789 and 15.573. In two patients with positive Wassermans the high N. content seemed to bear out the clinical diagnosis of the absence of syphilis. Six cases are quoted of clinically positive syphilis with negative Wassermann, in which the amount of N. was low.

Working with cerebrospinal fluid, the writer finds that the quantity of amino in normal as well as luetic cases is very small and that it does not seem to show the great differences obtained with blood serum.

It may be that the test will prove of value as a guide to treatment. There seems to be some relation between the disappearance of the plus Wassermann and the increase in amino nitrogen. The details of the test with a photograph and description of the apparatus are given.

(*Ibidem*, June 14, 1913, xcvii, No. 24.)

ERYTHROMELALGIA. REPORT OF TWO CASES WITH CURE. A. FOSSIER, p. 1238.

Two typical cases are reported which the author claims to have cured with sodium cacodylate. A review and discussion of the literature follows. The writer is inclined to the view that erythromelalgia is a peripheral nerve affection and an independent malady.

(*Ibidem*, June 21, 1913, xcvii, No. 25.)

IS THE RAPID CURE OF SYPHILIS POSSIBLE? W. BERNART, p. 1285.

The author outlines his plan of intensive antiluetic treatment, which in the main consists of the intravenous administration of neosalvarsan or salvarsan and mer-

curic chloride. In five inadequately treated syphilitics, all in the late secondary stage with positive Wassermann reactions, he has succeeded in producing a persistent negative Wassermann lasting in case 1, 24 months and in case 5, the last of the series, more than 18 months.

The treatment includes the administration of potassium iodide, salvarsan, mercuric chloride and cathartics.

No deleterious effect has been noted in any of the cases as a result of this active treatment.

(*Ibidem*, June, 28, 1913, xcvii, No. 26.)

ECZEMA "DECEDENS." W. CUNNINGHAM, p. 1349.

Cunningham offers objection to the application of the term eczema to clinical entities in nowise connected with the so-called true eczemas. He further contends that the term eczema should be entirely eliminated. It is, he says, archaic, inexact and misleading. It is applied to so many dissimilar conditions that it cannot properly attach to all. We know for example, that seborrhœic eczema is no eczema at all; that eczema marginatum is tinea cruris; that eczema tuberculatum is mycosis fungoides, etc. Yet these are included in the eczemas. Since eczema is characterized by inflammation of the skin, he would rename it dermatitis. This term carries with it its own definition; it immediately presents the idea of inflammation and of an exciting cause. Eczema, on the contrary, suggests little or nothing. Accordingly, he would speak of parasitic dermatitis, dermatitis madidans, infantile dermatitis, neurotic dermatitis, etc., etc.

(*Ibidem*, July 12, 1913, xcvii, No. 2.)

NEOSALVARSAN; INTRAMUSCULAR OR INTRAVENOUS? R. ORMSBY, p. 83.

The writer states that the more often he employs neosalvarsan, the more does he incline to the intramuscular method. With his technique the injections are practically painless. The location chosen is the upper outer gluteal region. Quinine and urea hydrochlorate is first injected, the needle left in situ for 20 minutes or more, during which period the neosalvarsan solution is prepared; 0.4 to 0.5 gm. neosalvarsan is dissolved in 10 cc. of water and injected through the needle left in situ into the anæsthetized area. Practically no reaction occurs.

(*Ibidem*, July 26, 1913, xcviii, No. 4.)

THE QUANTITATIVE AMINO (NH₂) NITROGEN CONTENT OF SYPHILITIC AND NON-SYPHILITIC SERUMS. (SECOND COMMUNICATION.) D. KAPLAN, p. 157.

Study of the manner in which drugs (such drugs for which spirochætæ display a positive chemotaxis) exert their influence on the spirochætæ, prove that it is necessary to have an amino (NH₂) molecule before the organism will take up the entire arsenic carrying substance. This affinity of spirochætæ for amino seems definitely established and it seems not unreasonable to assume that they require it for their life and development. It is but natural to conjecture, the author declares, that the subject of a spirillosis has to supply the NH₂ and consequently suffers a loss of it. Furthermore it may be permissible to conclude that as the invaded host rids itself of the spirochætæ, the amino content would increase. This deazotizing influence of the spirochætæ is apparent in most syphilitic serums, and this fact is offered as an added means of laboratory diagnosis. The study of the present series of cases confirms the author's former findings (*see abstract*, June 7, 1913)

namely, that syphilitic serum shows a marked diminution in the amino N. content. This and other interesting points are brought out in the following table:

GROUP	NO. OF CASES		WASS. REAC.	AMINO N.	QUANTITY OF NH ₂ N IN 100 CT. OF SERUM VARIED BETWEEN
	25	Lues clinically present	+	diminished	0.00—2.835 mg.
B	14	Lues clinically present	—	diminished	0.00—2.248 mg.
C	1	Lues clinically absent	+	normal	14.966 mg.
D	58	Lues clinically absent	—	normal	3.340—15.716 mg.
E	2	Lues treated	+	diminished	1.136—2.272 mg.
F	5	Lues treated	—	diminished	1.119—2.834 mg.
G	5	Lues treated	—	normal	3.967—11.225 mg.

In studying this table it will be noted that the difference between groups A to B, on the one hand, and D on the other, is quite evident. Groups B and F show us that the amount of (NH₂N) in the serum of a syphilitic remains diminished, regardless of the negative Wassermann. The factors necessary for the (NH₂N) to return to normal as in group G are not known. It is safe, the author thinks, to argue against syphilis where the amino N. is normal and where there are no clinical signs of disease. Such is the case in the patient of group C. This was a virgin, 26 years of age, who suffered from chronic headaches in whom clinical lues could be excluded. Her Wassermann was positive but her amino N. was 14.966, sustaining the clinical diagnosis of the absence of lues. The author adds that the positive reaction in this case of group G "was most likely faulty."

(*Ibidem*, Aug. 16, 1913, xeviii, No. 7.)

THE ÆTIOLOGY AND TREATMENT OF HYPERTRICHOSIS. P. BECHET, p. 313.

Discussing the ætiology, Bechet points out the frequent association of hirsuties with ovarian disease and suggests the concomitant production of a hormone with a specific influence on pilosity. For the removal of this condition, electrolysis remains the best means, X-ray being dangerous except in expert hands. The author's technique is described.

MEDICAL RECORD.

(June 7, 1913, lxxxiii, No. 23.)

Abstracted by LOUIS CHARGIN, M.D.

THE ROB. J. B. STEIN, p. 1020.

This is an interesting exposition of the remedies, the so called "Robs," secret specifics (antisyphilitic) of much vogue in the 18th and 19th centuries in France and other countries. It was first introduced in 1761 and is supposedly still on the market. The paper is of historical interest.

THE RELATION OF SYPHILIS TO PROGRESSIVE MUSCULAR DYSTROPHY. W. CADWALADER and E. CORSON-WHITE, p. 1033.

In a series of 27 cases studied with reference to the serum reaction, the authors are led to the belief, that there is some ætiological relationship between syphilis and the above named condition.

(*Ibidem*, June 4, 1913, lxxxiii, No. 24.)

THE PRESENT STATUS OF THE TUBERCULAR TEST. C. SLADE, p. 1079.

The author summarizes his views, the results of a large experience in pulmonary cases, as follows. The Moro test, from a clinical point of view, is not trustworthy. The subcutaneous injection of tuberculin is scientifically reliable. Clinically it is not absolutely so, even when negative. The severe reactions which sometimes follow makes its use as a routine measure unjustifiable. Because of the harm it may produce, the Calmette test should not be employed. He finds the von Pirquet test quite harmless and recommends this for routine work, although it is of very little practical value beyond the age of five.

(*Ibidem*, June 21, 1913, lxxxiii, No. 25.)

A CASE OF GRAVES' DISEASE WITH SCLERODERMA AND A POSITIVE WASSERMANN REACTION, TREATED WITH SALVAR-SAN. H. ZIEGEL, p. 1124.

The patient, a woman 28 years of age, presented the signs of Graves' disease with circumscribed scleroderma affecting the left upper arm and scapular region. The Wassermann test was positive. Following two intramuscular salvarsan injections, marked improvement was noted in both conditions. At the end of 21 months there had occurred a symptomatic cure of the Graves' disease and an involution of the skin process so that the involvement was less than one-third the original extent. The Wassermann had become negative. Further arsenobenzol treatment had been refused by patient on account of pain following injections. In a rational interpretation of the favorable changes, the writer states the following questions should be considered. Did the arsenic have a direct remedial influence on the conditions named? Or did the improvement occur spontaneously and coincidentally, after, rather than because of the arsenic therapy.

(*Ibidem*, July 19, 1913, lxxxiv, No. 3.)

LEPROSY AND THE KNIFE. E. S. GOODHUE, p. 3.

The writer asserts that in a large number of cases where the disease is localized, surgical, or any other treatment which will remove the then circumscribed focus, without opening up channels for metastatic dissemination, will cure the disease in a period varying from 6 to 12 months. Several examples are cited.

(*Ibidem*, Aug. 2, 1913, lxxxiv, No. 5.)

DIFFERENTIATION OF THE ERYTHEMA OF SCARLET FEVER AND THAT OF GERMAN MEASLES. S. HUBBARD, p. 197.

This is a good review of the above named subject. The writer recognizes two varieties of eruption in German measles. In one, the spot is perfectly formed at the time of appearance, sharply outlined and individualized. In the other variety, the macules are red, pointed, with distinct outlines which may spread at the periphery.

It is this latter form which may closely resemble scarlet fever. The dermatological aspect of the differential diagnosis is tabulated as follows:

SCARLET FEVER.	GERMAN MEASLES.
Confluent scarlet (pink) rash.	Non-confluent, dark red (violaceous) rash.
Rash punctate.	Rash macular.
Circumoral pallor.	Rash starts about the nose and upper and lower lips.
Rash appears quickly, spreads rapidly and disappears gradually.	Rash appears in one part at a time, appears gradually at other parts, fading at place of onset. Covers body in about 24 hours.
Rash appears first on neck and about clavicular spaces.	Rash appears about nose and lips.
Rash fades with yellowish shading; leaves stains more or less injected.	Rash fades with a brownish red, then to a light brown, and disappears, leaving no mottling of skin.
Desquamation in 12 days.	Desquamation in about 3 days.
Desquamation in sheets, flat scales.	Desquamation furfuraceous.
Itching more or less prominent.	No itching.

(*Ibidem*, Aug. 9, 1913, lxxxiv, No. 6.)

PERSONAL EXPERIENCE WITH NEOSALVARSAN. T. VAN RIEMST, p. 246.

From an extended experience, the author concludes that neosalvarsan is preferable to salvarsan on account of its equal efficiency, its lesser toxicity and easier mode of administration. It is indeed not a positive cure for syphilis, but is superior to mercury and potassium iodide. The intravenous method is recommended. The introduction of a little air into the vein has no deleterious effect. The intervals between injections should never be shorter than a week.

(*Ibidem*, Aug. 16, 1913, lxxxiv, No. 7.)

THE WASSERMANN REACTION IN CANCER. F. Fox, p. 283.

In a series of 215 tumors of various kinds (carcinoma, epithelioma, sarcoma, etc.) the Wassermann reaction was negative in all but 5 cases; i.e., it proved posi-

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tive in a little over 2%. Of the 5, 3 admitted lues, the other 2 were uncertain. The high percentages of some reports the author thinks are due to the variety of antigens used; the majority of antigens he thinks are not prepared from syphilitic organs. Other factors, as methods of performing the tests, etc., must be taken into consideration. It may be added that the diagnosis in the 210 negative cases were confirmed, in nearly all instances, either by section or autopsy.

(*Ibidem*, Aug. 30, 1913, lxxxiv, No. 9.)

THE RONTGEN TREATMENT OF ECZEMA. M. FISHER, p. 384.

Fisher reports excellent results in the treatment of eczemas of the acute and chronic types with the X-ray. He employs a very low tube with a minimum amount of current, only sufficient to illuminate the tube. In the acute cases the mildest sort of treatment is permissible; 5 to 6 minutes, with the exposed parts 18 to 24 inches from the tube. In the more chronic forms, stronger light, closer range and exposures of from 10 to 15 minutes are advised. The number of exposures varied from 4 to 21 or more, the intervals being every other day. Six cases are briefly reported, from a series of 62, showing the favorable results. Some of the series have indeed had recurrences, but a few added exposures sufficed to clear them up.

NEW YORK STATE JOURNAL OF MEDICINE.

(November, 1913, xiii, No. 11.)

Abstracted by CHARLES T. SHARPE, M.D.

THE PRESENT OBLIGATIONS OF PHYSICIANS REGARDING SYPHILIS, BOTH AS TO PATIENTS AND PUBLIC. E. WOOD RUGGLES, p. 564.

A plea for the early administration of salvarsan in the treatment of syphilis in the interest of the patient and of the public.

EDINBURGH MEDICAL JOURNAL.

(November, 1913, xi, No. 5.)

Abstracted by CHARLES T. SHARPE, M.D.

ECZEMA: SOME SUGGESTIONS TOWARDS ITS PREVENTION AND TREATMENT. W. ALLAN JAMIESON, p. 395.

The author advocates the use of epicolloid, a solution of pyronilin in acetic ether, to arrest an advancing eczema in the early stages. Later he uses the boric starch poultice, prepared as follows: Four tablespoonfuls of Glenfield starch and a teaspoonful of powdered boric acid are mixed with cold water to form a paste, and to this a pint of boiling water is slowly added, and the whole stirred till it becomes a thick magma. The hot starch is allowed to become perfectly cold and will resemble a soft jelly. This is spread to the thickness of three quarters of an inch on pieces of cotton or linen cloth and the upper surface covered with butter muslin and this placed on the skin and secured with a bandage which may be left on overnight and then another applied. Following the improvement, other methods are instituted.

For ointments, he advises eucerinum anhydricum or eucerinum cum aqua as an excipient. It is prepared from the pure wax alcohols of wool fat.

ON ELEPHANTIASIS NEUROMATOSA. NORMAN S. CARMICHAEL, p. 421.

Three cases of this interesting condition occurring in a mother and two children are reported, with a description of the clinical symptoms and a review of the pathology with Alexis Thompson's classifications of neuroma and neurofibromatosis.

Characteristics of Elephantiasis Neuromatosa.—Of congenital origin, it frequently grows in relation to a pigmented or hairy mole; sometimes a molluscum fibrosum seems to be its starting point. Often not apparent at birth, it shows its first sign in early infancy. There is no case reported commencing after puberty. It develops almost imperceptibly at first, growing *pari passu* with the growth of the child. About puberty, however, it frequently seems to take a spurt, until after some years, it presents the disgusting deformity shown in the photographs. Associated with elephantiasis one frequently sees other forms of neurofibromatosis in the same patient. The commonest of these is the plexiform neuroma. Other forms met with are the cutaneous neurofibromata (Von Recklinghausen's disease), the multiple neuro-fibromata, pigmented and other moles.

JOURNAL OF THE MISSOURI STATE MEDICAL ASSOCIATION.

(October, 1913, x, No. 4.)

Abstracted by CHARLES T. SHARPE, M.D.

BACTERIN TREATMENT OF PUSTULAR ACNE AND FURUNCULOSIS.
O. W. H. MITCHELL, p. 139.

Mitchell reports improvement with the use of autogenous bacterins in a series of cases after prolonged use of the injections, together with sulphur locally and attention to the alimentary tract.

CALIFORNIA STATE JOURNAL OF MEDICINE.

Abstracted by CHARLES T. SHARPE, M.D.

(September, 1913, xi, No. 9.)

MODERN THERAPY OF SYPHILIS. VICTOR VECKI, p. 358.

Vecki soliloquizes on the Wassermann reaction, salvarsan and mercury. He favors the removal of the syringe from the needle not only before the injection, to see if a blood vessel is entered, but also after the injection, in order to fill the syringe with air and then press this air through the needle *in situ*. The needle is freed from any rests of the mercury which may ooze out when the needle is withdrawn, thus frequently irritating the puncture-canal and causing abscess formation.

There can be no routine treatment of syphilis. Every single case must be studied, and the treatment modified accordingly. For this purpose, the Wassermann and Noguchi tests are of inestimable value.

He concludes with this sentence: "Mercury is still in the ring, and the more I know of salvarsan the better I like hydrargirum."

W. V. Breur, in discussing the above paper, stated:

1. As a working hypothesis, we may assume that syphilitic patients with positive spinal fluid reactions have the infection localized in the central nervous

system and are candidates for the late syphilitic nervous phenomena. In support of this, is the recent demonstration by Noguchi that spirochæte are present, in a considerable percentage of paresis cases, in the brain tissue. Noguchi demonstrated them in 12 cases of general paresis out of the 70 he examined.

2. Every patient should have a spinal fluid examination before being discharged as cured, and his spinal fluid and blood examined at intervals, for a long time afterward.

3. There is no close relation between the Wassermann test in the blood serum and in the spinal fluid. The one may be positive and the other negative.

4. With the Wassermann test positive in the spinal fluid, the butyric acid test has also been positive. It may be relatively weaker or stronger, and it may be strongly positive when the Wassermann test is negative. The cell count also bears but little relation to either the Wassermann or butyric acid tests.

5. The positive Wassermann reaction in the spinal fluid is more difficult to get negative than in the blood serum. With three intravenous injections of salvarsan together with mercury treatment, we have reduced the reaction on an average of about 50 per cent.

6. So far we have been able to reduce only one spinal fluid from a positive to a negative reaction.

7. We believe that mercury has but little effect upon tests in the spinal fluid, although we feel that it should be used vigorously.

The examination of the cerebrospinal fluid probably offers the greatest hope of determining beforehand which patients are candidates for the parasyphilitic nervous affections, and that the proper and persistent use of salvarsan, with mercury as an adjunct, offers great hope of preventing the development of these dreaded conditions.

THE CUTANEOUS REACTION OF SYPHILIS, (LUETIN REACTION.) (*Third Communication.*) JULIAN MAST WOLFSOHN, p. 365.

The results from over 900 tests made upon the syphilitic and the non-syphilitic patient seem to justify the conclusions that:

1. The luetin reaction is specific for syphilis.
2. The luetin reaction is especially valuable in the later stages of syphilis.
3. Treated secondary and congenital syphilis is apt to show positive luetin reactions.
4. In any case of suspected syphilis, whether previously treated or not, a negative luetin reaction must be observed for at least four to five weeks, so as not to overlook a delayed reaction.

(*Ibidem*, November, 1913, xi, No. 11.)

Abstracted by CHARLES T. SHARPE, M.D.

RINGWORM IN CALIFORNIA. HOWARD MORROW, p. 453.

This is an interesting report of this affection with special reference to its occurrence on the feet. Morrow advocates chrysarobin if the X-ray is not used and combines it with acid salicylic and phenol for the scalp, shaving the head and wearing a cap. For ringworm of the body, iodine and chrysarobin, of each 1%, in an ointment. For the feet, ung. hydrarg. ammoniata, with or without chrysarobin.

THE DIFFERENTIAL DIAGNOSIS OF PALMAR SYPHILIS, ECZEMA AND PSORIASIS. DOUGLAS W. MONTGOMERY and GEORGE D. CULVER, p. 458.

A differential study of sixty-four cases of eczema and nineteen each of psoriasis and syphilis.

PARASITIC SKIN DISEASE IN CALIFORNIA. ERNEST DWIGHT CHIPMAN,
p. 461.

This is an extremely interesting article that does not lend itself readily to abstraction. For the description of granuloma coccidioides and the differential diagnosis between this disease and blastomycetie dermatitis alone, it should be read. The general discussion of animal and vegetable parasitic diseases is also of considerable value.

THREE CASES OF PELLAGRA IN SAN FRANCISCO. JULES B. FRANK-
ENHEIMER, p. 467.

A report of three cases with special study of the reflexes.

BOSTON MEDICAL AND SURGICAL JOURNAL.

(November, 1913, clxix, No. 22.)

Abstracted by CHARLES T. SHARPE, M.D.

THE CLINICAL VALUE OF THE WASSERMANN REACTION. ABNER
POST, p. 777.

The author believes that the Wassermann reaction should be considered as a symptom rather than a test.

(*Ibidem*, Jan. 8, 1914, clxx, No. 2.)

CANCER OF THE LOWER LIP. JOSEPH C. BLOODGOOD, p. 49.

A critical study of two hundred cases shows that in not a single case did a cancer of the lower lip begin in normal skin and mucous membrane. There was a previous defect, as a rule, present some months before the signs of the development of cancer. In many cases the original or precancerous lesion had been observed by the patient for years before the signs of cancer developed. Therefore, there was ample opportunity in every case for the healing or excision of the lesion in its benign state.

Of smoker's burn, Bloodgood says: This is apparently a distinct lesion in the gross, and apparently quite distinct microscopically. At the muco-cutaneous border, at the point of contact of cigar or pipe, there appears a small depression, oblong in shape, with its long axis at right angles to the muco-cutaneous line; the color and consistency of the mucous membrane and skin is changed; the tissue looks charred; it is not a scab because it cannot be picked; on palpation, this little surface defect is leathery, and not moist and soft as normal mucous membrane and skin. The induration, however, of cancer is absent. Microscopically, it consists of degenerated hornified epithelium; there is no papillary body, no hair follicle or gland.

BOOK REVIEWS

Entwicklung und gegenwärtiger Stand der ARSENTHERAPIE DER SYPHILIS mit besonderer Berücksichtigung des Salvarsans (Ehrlich-Hata 606) und des Neosalvarsans. Nebst einer systematischen Zusammenstellung der bisher veröffentlichten Literatur. VON DR. MED. VICTOR MENTBERGER, Assistenzarzt der Universitäts-Hautklinik zu Strassburg i. Els., mit einem Vorwort von PROF. DR. A. WOLFF, Direktor der Universitäts-Hautklinik zu Strassburg i. Els. *Gustav Fischer*, Jena, 1913.

The difficult task of reviewing the development and present status of the arsenical treatment of syphilis has been ably accomplished by Dr. Mentberger, an assistant in the clinic of Professor Wolff at Strassburg. His book consists of 339 pages, of which nearly one-third (110 pages) are devoted to a bibliography containing about three thousand references. While the greater part of the text is naturally confined to the discussion of salvarsan, the first twenty-three pages contain short descriptions of other preparations of arsenic that were used in the treatment of syphilis before the discovery of Ehrlich's great remedy.

It is evident that the author is not a salvarsan enthusiast who can see only the favorable side of the remedy. Nor could it be said that he is a prejudiced opponent of salvarsan. He has simply discussed in a calm and dispassionate manner a subject upon which an immense amount has been written and over which many heated discussions have arisen. The value of the book is partly due to the large number of references which represent a vast amount of labor.

The volume begins with a brief review of some of the pioneer experiences with arsenic administered internally, locally, in the form of baths and in combination with potassium iodide. The favorable effects of arsenic upon syphilitic manifestations, especially in combination with other remedies, acted as a stimulus to Gautier to find a remedy which would combine such an effect with the well-known power of mercury. As a result, *enésol* (salicylarsenate of mercury) was prepared at his suggestion, and according to various reports, exerts a favorable action upon syphilitic lesions, without producing any disagreeable general or local reactions. In a similar way arsenic has been combined with sodium iodide as *arsojodin*, a remedy administered in pill form, which has been extolled by Fischer.

A new era in arsenical therapy was introduced by Uhlenhuth's preparation, *atoxyl*. Through his animal experiments, the treatment of syphilis was taken out of the domain of empiricism and the way was paved for the later discoveries of Ehrlich. While the clinical value of this new remedy was soon recognized, its use was abandoned after reports of blindness by Hallopeau and others.

Arsacetin, an organic preparation of arsenic, indirectly derived from *atoxyl*, was next introduced by Ehrlich. It also had to be abandoned after its administration had been followed by blindness and deafness.

Uhlenhuth, like Ehrlich, now attempted to improve upon *atoxyl* and in 1907 announced his combination of *atoxyl* and mercury, called *atoxylate of mercury* (*atoxylsaurer Quecksilber*). This was used with gratifying results especially at the Lesser clinic, no one obtaining ill effects except Zieler, who reported injury to the kidneys following its use. Further experimentations with this remedy were now given up as salvarsan appeared upon the scene. As Ehrlich later advised the use of mercury in combination with salvarsan, this preparation was taken up at the Wolff clinic with favorable results, especially upon the lymph nodes, which are resistant to most forms of treatment.

In the meantime the French observers had not been idle. In addition to *enésol*, good results were claimed by Mouneyrat for his preparation *hectin*. This was warmly praised by Hallopeau, although ill effects upon the eye had been noted by some other observers. They agreed in general with Hallopeau that *hectin* can produce good results, while being at the same time relatively non-toxic. Two other

preparations of arsenic were introduced by Mouneyrat and two others, Galy and Ludy, by de Beurmann, Mouneyrat and Fanon. Another derivative of atoxyl, soamin, has been used to some extent in England with results similar to those of atoxyl, including injurious effects upon the eye.

Ehrlich in the meantime continued his tireless efforts to obtain a remedy which would be parasitotropic and at the same time not organotropic—a goal which he thought he had achieved in the discovery of his 432nd preparation, called arsenophenylglyzin. Like its predecessors, however, this soon fell into disrepute from ill effects which it caused, such as paralysis, blindness and even numerous deaths. By continuing his attempts to render less toxic the arsenical portion of arsenophenylglyzin, Ehrlich at last succeeded in obtaining his wonderful "606," assisted on the clinical side by Berthelm and on the biological side by Hata. Then followed the first employment of the new remedy by Alt and later by Schreiber, Iversen and others; the immense interest and notice taken by the medical and the lay press as well, and the mischief created by the early hopes of a complete eradication of syphilis at a single stroke. The highwater mark of popularity of the new remedy, christened salvarsan as a trade name, was reached at the Tenth Congress of Deutsche Naturforscher und Ärzte at Königsberg, in September, 1910. Here practically every one spoke only of the brilliant results of its use. It was only later, after many careful observations, that the unfavorable reports concerning relapses, nerve-recurrences and deaths appeared. The writer comments upon the peculiar optimism that led some of the earliest writers to say that intramuscular injections were absolutely painless. He also speaks of the peculiar obstinacy with which Ehrlich and his associates tried to account for ill effects of salvarsan upon various theories, being unwilling to ascribe them to the toxic action of arsenic.

The effects of salvarsan upon the different manifestations of syphilis are next systematically considered. There is a general agreement among authors that the chancre becomes rapidly covered with epidermis but that the infiltration is not so favorably affected. As to the action on the lymphatic glands, the opinions are somewhat divided. A resumé of opinions concerning the early secondary symptoms shows that mucous membrane lesions are affected with astonishing promptness. Macular and papular syphilides generally disappear rapidly and moist papules and condylomata are fairly quick to flatten and dry. The most difficult to influence are the hypertrophic papules and palmar and plantar syphilides, while there is little or no effect upon the general adenopathy. There is a general agreement that in tertiary syphilis, with few exceptions, salvarsan is far superior to mercury. The almost unfailing brilliancy in malignant syphilis is also not to be undervalued.

Although diseases of the circulatory system are supposedly contraindicated, good results have been reported from the use of salvarsan in aortitis, aneurysm, myocarditis and even angina pectoris. A fine result is recorded in one case of lung syphilis, numerous good results in nephritis and unfavorable action in diabetes are mentioned. In tabes and paresis, salvarsan apparently produces no permanent therapeutic effect. A warning is sounded against experiments in these conditions with small doses, as they do no good and may actually prove dangerous. Gratifying results are obtained in cerebrospinal syphilis and syphilitic hemiplegia. Neuritis of syphilitic origin has also been favorably influenced according to a number of observers. For the treatment of syphilitic diseases of the eye, the writer concludes that salvarsan is a suitable remedy. In spite of numerous cases of deafness following the use of salvarsan, the drug has caused unmistakable improvement in pure syphilitic ear diseases. In hereditary syphilis, good results are reported from both direct administration and indirectly through the mother's milk. The majority of authors are also agreed that salvarsan can be given to every syphilitic pregnant woman who is otherwise healthy.

A few pages in fine print are devoted to non-syphilitic conditions that have been treated by salvarsan. The different methods of technique, including rectal ad-

ministration and the intraarachnoid method of Marinesco are next described, after which the general effects on the system, such as increase in body weight, and the local effects, such as thrombosis after intravenous and necrosis after intramuscular injections, are discussed.

The excretion of salvarsan after intravenous injections is probably not so fast as some have thought. According to Bornstein, differences in excretions in the three chief methods of administration, intravenous, intramuscular and subcutaneous, are not very great. It would seem that end products of salvarsan are stored as depots in the liver and other organs after all three methods.

The subjects of relapses, abortive treatment and reinfection are next discussed. To explain the relapses, the supporters of salvarsan claimed that there were certain arsenic-fast spirochaetes which could not be affected by the salvarsan, while relapses following intramuscular injections were ascribed to insufficient absorption. In regard to abortive treatment, there can be no doubt that many cases fail to develop secondaries if treated at an early period, though they may fail to remain Wassermann negative. The case of Mulzer's is quoted in which, however, the earliest possible treatment failed to abort the disease. This was a student, who, on account of a suspicious intercourse, received an injection of salvarsan, which failed to prevent the appearance of a chancre several weeks later. That cases of true reinfection after salvarsan treatment can occur, is shown by reports of men of the greatest experience. It is necessary, as John pointed out, to consider each case in a most critical manner.

To draw conclusions in regard to the action of salvarsan upon the Wassermann reaction is difficult or impossible, owing to the varying and other contradictory results that have been obtained by different observers. Such results were dependent upon variation in dose, stage of disease, kind of injection, etc. It may be remembered that only the earliest publications contained the very favorable reports upon the ability of salvarsan to change a positive to a negative reaction.

In spite of two and a half years of experience, there is still no unanimity of opinion regarding dosage, so that it is hard at present to recommend a definite scheme of salvarsan therapy. At all events, the recent reports show that better results are obtained from a combination of mercury and salvarsan than from salvarsan alone.

The chapter on general by-effects opens with a reference to Wechselmann's second book on salvarsan, in which he states that the drug is "non-poisonous in doses in which it has thus far been used." The author remarks that it is inconceivable that Wechselmann could dare to make such a statement, as it was early discovered that even the smaller doses could produce effects that are typical of the action of arsenical preparations. He then discusses fever as the most constant general by-effect and recounts the various theories that have been advanced to account for it, upon other grounds than the action of arsenic. The list of such theories includes the breaking down of endotoxines, idiosyncrasy, anaphylaxis, faulty technique, excess of alkali, "Wasserfehler," "Glassfehler," temperature of the solution, psychic influence, lead and copper from distilling apparatus and finally sulphur, dissolved from the rubber tubing. While it is possible that some of these causes may act in certain cases to produce fever, practically no one at the present day doubts the existence of salvarsan fever, which is solely due to the toxic action of the arsenic.

The theory of "Wasserfehler" was first put forward by Wechselmann and was seriously considered by many scientific observers. He claimed that the fever and many other by-effects were due to the protein substance of killed organisms, which was present in ordinary distilled water. To avoid this error it was necessary, according to Wechselmann, to use only freshly distilled water. This theory was accepted by Ehrlich, who spoke of an ordinary and a pernicious "Wasserfehler" as the cause of mild and severe symptoms, respectively. The strongest argument against such a theory, however, was the fact that the same toxic symptoms could be produced by intramuscular injections, where no water at all was used (oily sus-

pensions). Furthermore, when several patients in the same stage of syphilis were injected from the same stock of solution, one would show toxic symptoms and another no symptoms at all. The experiment of Mulzer was also quoted, in which he used for injection purposes, water that had been allowed to stand in open flasks in a laboratory for six weeks, and which naturally contained millions of bacteria, moulds, etc. This was thoroughly sterilized and used for an intravenous injection of salvarsan, without causing the slightest disagreeable symptoms. The author concludes that no one who is impartial can at the present time hesitate to consign the "Wasserfehler" to the "land of fable" (Finger) or to consider it as a "fairy tale" (Mulzer).

After Wechselmann and Ehrlich were unable to explain away the by-effects through bacterial "Wasserfehler," they sought another cause and claimed to have found it in the chemical "Wasserfehler." They contended that the trouble resulted from substances derived from the glass itself. Only water that was distilled from an apparatus made of hard glass was supposed to be free from this objection of "Glassfehler."

In discussing the general manifestations of poisoning after the use of salvarsan, the writer gives a long list of possible by-effects. These he thinks, represent symptoms that are absolutely characteristic for arsenic and its derivatives, such as are given by Lewin in his book on "Nebenwirkungen der Arzneimittel." The effect upon the nervous system either with or without the co-existence of syphilis is even more characteristic for arsenic poisoning. According to the time when the injury to the nervous system takes place, Ehrlich recognizes two groups of cases. The first consists of functional disturbances occurring within three to four days after injection, which he considers a sort of "Herxheimer reaction of the nervous system," due to liberation of endotoxines. The second group consists of injuries occurring weeks or months after the injection and are the so-called nerve-recurrences ("Neurorezidive").

Finger was the first to call attention to these nerve-recurrences in patients treated by salvarsan and pointed out the frequency of these symptoms at an early stage of the disease, not hitherto observed. Such results were noted most frequently in the acoustic nerve, though the optic and other cranial nerves as well as the spinal nerves were attacked. The author concludes that these nerve-recurrences do not represent a neurotropic action of salvarsan. He thinks that the salvarsan creates a *locus minoris resistentiæ*, which is then attacked by syphilis.

The deaths following salvarsan and neosalvarsan are next given in a detailed manner, many of the infant cases being omitted, as such patients die so readily from numerous causes. Of the 274 deaths recorded, 41 occurred in non-syphilitic patients. The cases were divided into three classes: 1. Those directly due, 2. those indirectly due to salvarsan; 3. those due to salvarsan administered in the presence of a contraindication. In the author's opinion, 57 cases, or 31.5%, come under the first class. In the second class are included cases in which the salvarsan brought the condition to an acute stage and hurried the death of a patient. In spite of varying opinions regarding the dangers of the drug, such a thing as a salvarsan death does occur, notwithstanding every precaution that may be taken.

A comparatively small amount of space is devoted to neosalvarsan, as the writer thinks it impossible at the present time to obtain a comprehensive view from a study of the literature. There can be no doubt of the convenience of its administration. Otherwise its dangers and by-effects are analogous to those of salvarsan, according to clinical and toxicological investigations. The 29 deaths which are recorded represent a higher death rate than that from salvarsan, in proportion to the number of injections that have been given. Its use has been entirely given up at the Strassburg clinic on account of some severe toxic symptoms and the fact that even in large doses it is found to be less effective than salvarsan.

In the concluding chapter the writer gives the indications and contraindications for the use of salvarsan and characterizes the Ehrlich remedy as unquestionably the greatest achievement of modern syphilis research.

H. F.

PORTFOLIO OF DERMOCROMES. By JEROME KINGSBURY, M.D., Attending Physician, New York Skin and Cancer Hospital; Physician for Diseases of the Skin to the Presbyterian Hospital Dispensary; Member of the American Dermatological Association; Member of the New York Dermatological Society, etc. Chapters on Syphilis by William Gaynor States, M.D., Assistant Surgeon, New York Polyclinic Hospital; Formerly Instructor in Genito-Urinary Diseases; Member of the American Medical Association; Member of State and County Medical Society of New York; West Side Clinical Society, etc. With 266 colored illustrations and 6 half-tone figures. Rebman Co., New York.

As stated in the preface "this portfolio of dermochromes contains 266 colored and 6 black and white illustrations. All of the colored plates are from Jacobi's *Atlas der Hautkrankheiten*, and 217 of the figures appeared in the fourth American addition of this work, known here as the *Jacobi Dermochromes*. The remaining 49 figures are from the fifth German addition of the *Atlas*, and are now, by arrangement with the German publisher, presented for the first time in this country. The black and white illustrations, representing different types of alopecia, are from photographs taken for me by William B. Trimble."

The Portfolio, then, is a new edition of the *Jacobi-Pringle Dermochromes*, with the addition of many new colored figures and half-tone illustrations. It is published, as before, in three volumes. For those who possess the *Jacobi Dermochromes* a single volume has been prepared, which contains the new text and the new illustrations.

The new edition is edited by Jerome Kingsbury, who has written an entirely new dermatological text. A perusal of this text shows that the editor has carefully studied the authoritative text-books, added this to a knowledge gained by long experience in dermatology, and then evolved a description of the various diseases, which is concise, sufficiently complete, accurate and a pleasure to read. It seems to us that this text admirably fulfils its purpose, which is not that of a text-book, but rather an attempt to convey to the student, by words and pictures, an accurate general conception of the diseases contained in the work.

Pringle's text in the former edition was very good, but the new text is more complete and has brought the various subjects "up-to-date"; also it has been written especially for American physicians.

Among the 272 illustrations are found practically all of the common dermatoses, including most of the cutaneous syphilitic manifestations, and, also, many of the rarer forms of skin diseases. The colored reproductions are superb, and faithfully depict the diseases as seen in life. With one possible exception, the new half-tones materially add to the value of the work. We refer to the picture of syphilitic alopecia. It would seem advantageous to obtain a clearer description of the characteristic "moth-eaten" appearance.

We note that there is a better grouping of the plates, and, also, an improved and complete index.

States has given a good general outline of syphilis. To deal with such a huge subject in so small a space is indeed a difficult task. We feel that more emphasis could have been placed upon syphilis as a general disease. While we realize that there can be no routine treatment of syphilis, yet it would seem wise to guide the physician in a concise manner in the management of the disease from the time of infection throughout the entire course of the affection, explaining the indications for routine and for special measures. We would appreciate, also, seeing a few American names among the foreign quotations.

The volumes are beautifully bound in leather, well printed on excellent paper, and are exceptionally artistic. There are a few typographical errors, that should be corrected in the next edition.

The Portfolio will be of value to skilled dermatologists for teaching purposes. It would seem invaluable to students, general practitioners and physicians in specialties other than dermatology and for dermatologists who have not the clinical facilities found only in large cities.

G. M. M.

THE JOURNAL OF CUTANEOUS DISEASES

VOL. XXXII

MAY, 1914

NO. 5

OBSERVATIONS ON PITYRIASIS ROSEA.

By W. D. OWENS, M.D., U. S. Navy.

IN recording this series of thirty cases of pityriasis rosea, I have endeavored to establish the character of the lesions, their distribution, the presence of the primitive plaque, the signs of accompanying constitutional disturbances, the occurrence of itching, the comparative frequency of the affection in blondes and brunettes, and to indicate the season of most prevalent occurrence.

In my efforts to determine the cause of pityriasis rosea, I have carefully considered the possible parasitic, exogenous and endogenous influences and will present the result of my observations in regard to the aetiology of the disease.

In ten cases I have recorded the blood findings and in eight instances the urine examinations, which were negative.

The occurrence of small macules is the first manifestation of the eruption of pityriasis rosea. The early macular lesions consist of a varying number of round or oval, slightly raised, pink or salmon-colored spots, exhibiting dry furfuraceous scales. Almost invariably the macular efflorescences are discrete; the lesions are guttate, and in rare instances, nummular. Occasionally there occurs among the lesions of the general eruption, a patch formed by the confluence of one or more macules. Two patients of this series presented such patches. In one instance the skin over the right scapula was involved. In the other case a patch as large as one's hand occupied the lumbar region.

The macules as they age, become shriveled, and in the process of shriveling form shallow grooves over the surface of the lesion. These grooves are in the opposite direction to the long axis of the body, an observation that may aid one in determining a differential diagnosis.

As the macules advance, they oftentimes form annular or circinate lesions, presenting an outer ring of pinkish color, while the

centre has the characteristic shriveled appearance. The circinate lesions are scattered at irregular intervals among the more numerous macules. They are larger than the macular form of the eruption and are more often oval or elongated than round.

Dr. G. H. Fox, in a recent paper on *pityriasis rosea*, states that the circinate lesions may become confluent and extensive marginate patches result, manifesting a predilection for the axilla or groin. I have studied such a case which developed from two circinate lesions of the axilla.

The regions of the body most often involved by the lesions in my observations, corresponded with the areas of predilection as recorded by Gibert in his original description.

I have generally found that the early lesions first appeared upon the abdomen instead of spreading over the upper portion of the body and thence downward to the thighs, as indicated by Gibert. This knowledge was so strongly impressed upon me that, passing down the rows of men at weekly body inspection, I invariably sought the anterior belt region as the site one would examine to detect the eruption of *pityriasis rosea*.

Brocq, in 1887, announced that preceding the general eruption, there occurred a primary lesion which he designated as the "plaque primitive." When present in my series, it was noted as an elongated, oftentimes irregular area, peripherally hyperæmic, with a sluggish, buff-colored centre. Brocq says, "It may be found in the midst of the secondary eruption by its larger size." In my series it has been noted in eight cases, once upon the chest, once on the pubes, and in six instances it has occupied an area upon the abdomen, included by the left half of the epigastric region, the left hypogastric region, the left lumbar and the left inguinal region. The following sites have been recorded by different observers: over the scapula, upon the neck, the arms, on the thighs, upon the left sterno-mastoid region. Allen reports a case where it involved the whole chest wall. The uniformity of opinion is that its most frequent site is somewhere upon the trunk, which corresponds with Brocq's original contention.

The writings of different observers as to the presence of constitutional symptoms occurring in *pityriasis rosea* are as varied as they are numerous. Such excellent authorities as Jacques, Bouchard, Feuland, Weiss and Crocker remark upon the frequent coincidence of *pityriasis rosea* and gastric disturbances but there are competent authorities who fail to substantiate these findings. That systemic disturbances do occur in the disease most authors concede.

It has been urged by those who consider the course of the disease not unlike syphilis, that constitutional symptoms do precede the general eruption, and at the time of examination are not evident. While interne at Providence Hospital in this city, I had my first experience with pityriasis rosea. The patient, a young man, developed a sharp attack of tonsillitis, accompanied by the usual symptoms. After three days in bed the attack subsided, and it was then that the presence of a disseminated macular eruption was noted. The tonsillitis and its attending symptoms led to the diagnosis of syphilis. The patient refused to abide by this diagnosis for the excellent reason that there had been no exposure. Carmichael, of this city, was consulted and readily diagnosed the affection as pityriasis rosea, which diagnosis proved to be the correct one. In my more recent study of thirty cases, examination elicited the presence of tonsillitis in nine cases, and in three additional instances, acute catarrhal inflammation of the upper air passages. It is to be remarked, however, that the conditions here mentioned are extremely prevalent at the Naval Training Station during the Winter months.

Gastric dilatation, as described by Feuland and several others, was never observed. In none of my cases were there signs of gastric disturbances, nor was there an enlargement of the submaxillary or posterior sterno-mastoid glands as mentioned by Crocker.

I have recorded the occurrence of itching in seven instances. Six are noted as "when overheated" and the remaining case complained of itching after his shower bath (fresh water).

The comparative frequency of the occurrence of the disease among blondes and brunettes in this series corresponds with the findings of Stelwagon, who states that it is found "less frequently in those of dark hair and complexion than in those of medium and blonde type." I have noted the appearance of the affection in nineteen blondes and eleven brunettes.

In regard to the prevalence of the disease in certain seasons, I have tabulated by months the first year of this study, and have recorded six cases occurring in October, three in November, three in December, four in January, one in April, two in May, one in June, none in July, two in August, and four in September. Thus from my figures, it was found that the larger number of cases occurred in the Autumn. This agrees with Towle's analysis of 202 cases. Gibert found it more prevalent during the Summer months, Bazin a more common affection of the Spring, Tandler that it developed with the change of seasons, while Crocker and Fiacco regard it as

being unaffected by the seasonal variations, with which opinion I readily concur.

The blood findings in pityriasis rosea and the blood findings of diseases of the skin in general, are similar. Thus my counts indicate two important characteristics, an eosinophilia and a lymphocytosis. The white counts were not below 5,600 nor greater than 8,900. The red cells were normal. The hæmoglobin tests are recorded from 91 to 100%.

The various theories in regard to the ætiology of pityriasis rosea are confusing and uncertain.

The fact that my series of cases has occurred among the personnel of a military organization, living in barracks, may afford additional evidence to further substantiate the contention of those observers who believe the disease is parasitic in nature and therefore possessing contagious properties. In 1882 Widal announced the discovery of a parasite which he named the *Microsporon anomon*. Three years later, Ferrari, in a paper upon the ætiology of pityriasis rosea, confirmed the findings of Widal. Kaposi has stated that he observed a vigorous growth of mycelium in a patient whom he exhibited before the Vienna Dermatological Society in 1889, and Neuman, at the same meeting, said that he was able to demonstrate the mycelium in such cases by soaking the scales in xylol. More recently, Oro and Morsea have reported their investigations to the effect that they demonstrated in the scales non-specific organisms, corresponding to the *Bacillus subtilis*, *Staphylococcus pyogenes aureus* and *Streptococcus pyogenes*. In opposition to the views expressed by this limited number of observers there have been a vast number of competent authorities who have failed to demonstrate the presence of a fungus.

In favor of the affection possessing contagious properties, it may be argued that Peroni has reported the occurrence of the disease in epidemic form. Fordyce has observed the disease in husband and wife and two sisters. Zeissler has noted the affection in husband and wife. Crocker saw two cases in the same family and Fox in mother and child. In my series, three cases have occurred in the same company within the period of one month, while in six instances the patients have occupied the same dormitory.

I have endeavored to find some kind of fungus in fourteen cases, conducting frequent examinations of the lesions during their different stages of advancement, but my efforts have been negative. During the progress of my studies, it occurred to me that if the disease was parasitic in character, eminent and important factors

indicated an infection with spirochætes. Syphilis and yaws are spirochætal diseases, exhibiting clinical manifestations somewhat similar to pityriasis rosea. Like syphilis and yaws, the general eruption of pityriasis rosea is preceded by a primary lesion. In common, the three diseases present adenopathy and, in each, with the appearance of the secondary eruption, constitutional symptoms frequently occur.

In an article entitled "The Interpretation of the Results of the Wassermann Test," Dr. Craig of the Army Medical School found that "Alcoholic extracts of not only *spirochæta pallida* give complement fixation in certain cases of syphilis, but that the same results are often obtained with alcoholic extracts of *spirochæta pertenue*, *spirochæta microdentia*, and *spirochæta refringens*."

To quote from the same paper, Craig states that "In three cases diagnosed as pityriasis rosea, a plus reaction was obtained, which disappeared on the subsidence of the eruption. Other cases of the disease have been tested with a negative result, but the occurrence of the reaction in this disease should be noted." In Cases 29 and 30, of this series, Wassermann tests were made at the Naval Medical School. Case 29 was reported as negative. Case 30 was reported as positive (weak).

Such investigations as I have been able to conduct would preclude the hypothesis that the infection is spirochætal in nature. Frequent examinations with the dark ground illuminator, with variously stained specimens and with the Indian ink method have failed to demonstrate spirochætes in the lesions of six cases of pityriasis rosea.

The inoculation of two volunteers with the scales and scrapings taken from typical lesions of pityriasis rosea failed to transfer the affection. In two instances, which I have reported in the Naval Medical Bulletin, the intravenous administration of salvarsan failed to have any effects on the eruption of pityriasis rosea.

I have carefully considered the views expressed by Lassar, Hutchinson and Kromayer, who regard the affection as incident to extraneous causes and would incriminate unclean underclothes kept in poorly ventilated rooms. Such conditions do not exist at the Training Station.

Bulkley and Allen each report a case occurring among the attendants of a Turkish bath. This knowledge led me to investigate the shower baths, the daily use of which are required of all apprentice seamen. Salt water soap, soluble in both sea water and fresh, made from pure cocoanut oil and the necessary alkalies added (2

to 3%) is oftentimes used in conjunction with the showers. The showers consisting of cold water are seldom followed by the warm bath to remove the remaining soap, with the result that soap may accumulate upon the skin. This tends to diminish unduly the sebaceous secretions, and the more alkali present the more frequently will dermatitis occur. It is not uncommon to observe such a dermatitis, but evidence to convict pityriasis rosea as caused by a mechanical or direct chemical irritation is wanting.

Four patients, each presenting an annulo-macular eruption, were selected and non-affected areas of their trunks and extremities were subjected to a thorough lathering with salt water soap for three consecutive days. At no time during or after the test did the non-affected areas show a tendency toward the formation of new lesions.

In a previous paper, I have expressed the opinion that pityriasis rosea is an erythematous disease. This view was advanced by Weiss in 1903 and has been more recently adopted by Rasch of Copenhagen. If one accepts this opinion, then, in the light of recent investigations, one may conclude that pityriasis rosea is a phenomenon of anaphylaxis. Brilliant investigations have been conducted by Bruck, Forok, Phillipson, Gilchrist and many others. These investigators have successfully demonstrated that erythemata, urticarias, and purpuras are inflammatory in character, incident to the action of poisons upon the vessel walls and the surrounding tissues. These poisons are foreign proteins acting upon the living cells and tend to produce a hypersensitiveness of the organism. To include the symptom-complex of pityriasis rosea among the anaphylactic phenomena, I believe to be the logical clinical view to adopt. Thus the eruption and the frequent systemic disturbances of pityriasis rosea constitute an anaphylactic reaction in an individual hypersensitized to a foreign protein.

Whether the foreign proteins are introduced into the organism from the inspired air, through faulty digestion, causing the liberation of foreign proteins and their split products, or as the result of great physical stress, are factors that future observers must decide.

In this series of cases the patients in every instance were exposed to each of the sensitizing influences enumerated.

The apprentice seamen sleep in dormitories artificially ventilated. They are provided with the same food and are subjected to a constant physical strain by the frequent routine drills.

In this study, the paramount condition associated with the eruption of pityriasis rosea was tonsillitis. The relation between ton-

sillitis, the eruption, and the ingestion of foreign proteins through the inspired air are factors for consideration.

Clinically, the anaphylactic hypothesis would explain the sudden onset of the affection. It would account for the varied and confusing constitutional disturbances reported, and of more importance from a military standpoint, it would eliminate the much discussed contagious character of the affection and would explain the infrequent occurrence of barrack, asylum, and household epidemics.

PITYRIASIS ROSEA: CLINICAL OBSERVATIONS

By HARRY E. ALDERSON, M.D., San Francisco.

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THE following definition of pityriasis rosea (Gibert) is offered as covering the present clinical conception of the condition:

A mild, superficial, inflammatory, usually self-limited disease involving the skin, occasionally preceded by or associated with constitutional disturbances, and characterized by the rapid appearance of pale reddish, slightly elevated, roundish lesions (the so-called "macules"), discrete at first and often confluent later, symmetrically arranged, mostly on the covered parts of the body. These macules are mostly about the size of a thumb nail,—or they may be much smaller, or occasionally somewhat larger. They usually develop into brownish or salmon-colored plaques, through desquamation of their centres (giving a characteristic finely wrinkled appearance), and become bordered by a narrow, rosy-red zone. Frequently the eruption is preceded a short time by the appearance of a single lesion which becomes larger than the others and persists throughout the course of the eruption (the "primitive plaque" of Brocq).

It is fully realized that this definition will not meet with unanimous endorsement. The principal purpose in presenting the same, is to describe the clinical picture in the mind of the writer in making his diagnosis of pityriasis rosea.

The diagnosis of this disease is not difficult where the lesions are well defined; but there are cases occasionally met with, where the

appearances very strongly suggest disseminated ringworm. Other eruptions likewise clinically resemble that of the disease under consideration, but later developments or the finding of a fungus definitely establish another diagnosis.

A patient seen by the writer in September, 1910, illustrated this fact very well. Mrs. S. presented herself with scattered macular lesions over the entire chest, both arms and upper forearms, resembling very strongly pityriasis rosea. A few of the lesions had pale, brownish, slightly desquamating centres. There was nothing like a primitive plaque to be found, and the patient stated that she had not observed anything of the sort. The disease had been spreading for about three weeks. Scrapings from lesions readily showed an abundance of mycelia and spores resembling those seen in chromophytosis. The condition responded to treatment in two weeks. In this case a diagnosis was not possible without the aid of the microscope. Similar cases are met with in the experience of every clinician, and (as several writers have observed) it may be due to this that some clinicians have reported the findings of a fungus in scrapings and on cultures. Geo. H. Fox¹ recently called attention to the fact that there are widely different conditions in which the clinical appearances strongly resemble those seen in pityriasis rosea (Gibert)—for instance, eczema marginatum and eczema seborrhœicum. He suggested that perhaps some of these conditions were more closely related than is generally believed at the present time. It can be asserted, however, that so far, in true pityriasis rosea, the presence of a fungus has never been fully established, nor does the course or distribution of the eruption often correspond with the condition known as eczema seborrhœicum.

At one time the disease was considered by many to be due to some internal derangement (either a bacterial affair or that vague and frequently quoted condition popularly known as "intestinal toxæmia"). Of late there has been a growing tendency to attribute it to the presence in the skin of a cryptogamic parasite,—consequently every one studying this condition includes in his investigation a careful search for the same. This search is being prosecuted diligently in various parts of the world by men with every known laboratory facility at their command; and yet no one so far has been able to prove the existence of a causative organism. It is true that fungi have been discovered in lesions resembling those of pityriasis rosea; but it is not established that said cases were not examples of disseminated ringworm. Some observers have found sporelike bodies in scrapings; but culture experiments and inoculations have given nega-

tive results. Recently Du Bois² has recorded the finding of spores in scrapings; but he was unable to establish the identity of the organism culturally or by inoculation. Among the work of many others who searched persistently for parasites may be mentioned that of Szaboky,³ who thoroughly examined scales, tried to cultivate organisms on various special media, and attempted animal as well as human inoculations without success. In almost every case he obtained sarcinæ, cocci, streptococci and staphylococci, as did also Tandler, Oro and Kobner. In Towle's⁴ series there were blood counts made in five cases, showing lymphocytosis, eosinophilia, and increased mast cells. The most marked blood changes were in a case where the eruption was most abundant and the slightest changes were noted in a case where the eruption also was slight. Cabot observed that these findings seemed to him to point against the explanation of the disease as an infectious process.

Regarding the favorable results of antiparasitic treatment, it can be said, as remarked by D. W. Montgomery,⁵ that "we must admit that in every self-limited disease with wide variations in the time of its duration, it is difficult to determine the good effect by any mode of treatment."

It is recognized that the failure to prove scientifically the existence of a causative organism is not proof that the disease is non-bacterial. It has some bearing, however, at the present time, in weighing the parasite hypothesis against the theory that the disease is due to some internal disturbance. There are various facts and some bacteriological evidence which appear to support the parasite hypothesis. On the other hand, there is abundant clinical evidence, more or less incomplete, it is true, but quite as well founded as the scant data so far developed by the laboratory. Of course this hypothetical parasite may be of such character that it cannot be seen with the present powers of the microscope, and it may not grow on media so far developed.

The histopathological changes as described by Jarisch,⁶ Unna,⁷ Hollmann,⁸ Löwenbach,⁹ Sabouraud,¹⁰ Towle and others do not support the idea that there is a causative parasite locally. In pityriasis rosea, according to Löwenbach, the epidermis shows only minor changes, such as moderate parakeratosis and acanthosis, with slight intercellular œdema and leucocytosis, while the upper corium shows extensive changes. In the conditions showing a fungus locally, the epidermis (as would be expected), presents the principal changes. Hollmann, who studied over two hundred preparations, observed that in the earlier macular stage of pityriasis rosea, the principal changes

were in the corium (especially perivascular cell infiltration in the papillæ). In the later stages he noted a marked increase in this inflammatory reaction. He believes that the process begins in the corium and later spreads to the different epithelial layers, and that the different findings heretofore reported, represent different stages of development. He noted superficial formation of minute sub-corneal vesicles (analogous to those in eczema, described by Unna) in a few of his preparations. Sabouraud observed these same appearances, and in the older lesions, the distinct minute vesicles very superficially situated in the epidermis. Phagocytes were not found in these vesicles, from which fact he reasons that the disease is not parasitic in origin.

So far, the clinical observations and histopathological findings have been our mainstay and, until the laboratory and microscope bring us more evidence, we shall be obliged to continue to rely upon the former for most of our ætiological evidence.

The following reports of patients observed by the writer in private practice and in his service at the Stanford University Medical Department include not only positive clinical findings, but negative bacteriological reports as well. It is greatly to be regretted that cultural experiments were not made and that none of the patients would allow a biopsy. The writer offers these reports, incomplete as they are, in the hope that the few definite clinical findings may not be without interest, and that they may stimulate valuable discussion on the part of those whose clinical experience has been more extensive. It is fully realized that only suggestive conclusions can be drawn from 11 case reports,—but certain facts stand out and cannot be ignored in considering the possible ætiology of this disease. In all the following selected cases the symptoms were so well defined that there was not the least difficulty in making a diagnosis. In making these selections from the records all so-called "border-line cases" were eliminated. Many scrapings from lesions in different phases of their development were washed in ether and then treated with 10% aqueous solution of potassium hydroxide and examined microscopically for a fungus over long periods, with uniformly negative results.

A complete review of the literature on this subject will not be recorded at this time, for it is believed that the discussion will fully cover that phase of the question.

CASE REPORT.

Case I. (Dec. 6, 1911.) University student; age 22; blond; male.

His health was excellent until a short time before his attack of pityriasis rosea, when he worked extra hard in college, was somewhat nervous and "run down" and had poor appetite and frequent gastric distress. One evening he received a very severe wrench of his knee and was badly frightened by the overturning of a crowded bus in which he was riding. His injuries confined him to bed. On the day following the accident, the primitive plaque of pityriasis rosea appeared over his right lower abdomen. Other lesions appeared during the next few days and the eruption soon became thickly distributed (but never confluent) over the regions above the mid-thighs and below the level of the clavicles. It covered the upper extremities as far down as the mid-forearms. Both macular and circinate lesions were present and were quite typical clinically. One week after the onset of the disease, a second crop of pinhead sized lesions appeared amongst the older ones. They gradually enlarged peripherally to about the size of a thumb nail. The primitive patch persisted. All the lesions gradually subsided and disappeared completely within five weeks of the onset of the eruption. There were no subjective symptoms noted and the patient felt much benefited in every way by the enforced rest in bed. Several scrapings from lesions were examined for a fungus, with negative results.

The patient was given permanganate baths, 3% salicylic ointment, alcohol rubs, zinc oxide and salicylic dusting powder, salicin 0.3 gm., t. i. d., cascara, and a restricted diet.

Case II. (Feb. 3, 1912.) Mr. C., University professor. Age, 31. Brunette; married; fairly well nourished.

His past health has been good. He is of the nervous, hard working type. His digestion is always good. He perspires very little, as a rule. At the time his skin eruption appeared, he felt "perfectly normal in every regard and had no other ailment at the time." For some time previous to this date, in addition to his regular college duties, he had been working very hard on a book which he was about to publish. He stated that the "rash seemed to have appeared after having spaded up a piece of garden plot and after having taken a bath immediately afterward," while warm and perspiring. The characteristic primitive patch, which came in the right groin, was followed shortly by macular and circinate lesions which spread over the middle part of the trunk only. There were no subjective symptoms. The duration of the eruption was three weeks. The following were prescribed: Salicin (0.3 gm. every four hours), 3% salicylic acid ointment, and permanganate baths.

Case III. (Sept. 17, 1912.) Mrs. F., age 43; housewife; brunette; robust and well nourished (rather fleshy). Very nervous disposition.

Family history: Parents alive and well. Grandfather 109 years old and feels well. Grandmother, 98 years old and in good health. Patient's mother the youngest of 22 children. Patient the eldest of 16 children.

Past history: She had had the usual diseases of childhood. Menses began at 16 years. The flow was always scanty. She has lived in South Africa and Mexico (8 years in latter place where she had several attacks of malaria). She had never had any other tropical disease. Last winter she had rheumatism and influenza. She was married in 1887. Her husband died and she married again in 1902. There were 4 children, all by the first husband. She had a miscarriage, followed by pelvic abscesses in 1908, necessitating panhysterectomy. However, she states that she menstruated regularly up to 3 years ago (?). For 5 years after the operation, she was very pale. Her digestion is apparently good and her bowels quite regular. She rarely has headaches. Three months ago she had frequent excessive urination for a brief period.

She is extremely worried of late over financial matters (formerly well to do, had own home, servants etc., but now almost destitute and husband has disappeared).

She has a large ventral hernia (scar between recti abdomini one inch broad and the muscles so separated that the hand can be forced under their inner edges and the upper pelvic region can be palpated).

Status præsens. The patient is well developed and well nourished. There is no œdema, no cyanosis, no dyspnoea. Examination of the head, eyes, tongue, throat, ears, thorax and extremities elicited nothing abnormal.

The abdomen large and fleshy. Along McBurney's point and extending upward along the colon, on deep palpation, considerable tenderness is manifest. No history of appendix trouble. Huge ventral hernia (previously described). The urine is normal. There is no adenopathy.

Course of the eruption. The herald patch came over the right shin 3 weeks ago. It is still present. Other lesions came in rapid succession (macular and later circinate) in crops. With the onset of the eruption across the shoulders, she had severe myalgia of the upper trapezii.

She now presents typical lesions over and under the breasts, across the shoulders, over the entire back and thighs, and scattered over the calves.

Repeated examination of scales in potassium hydroxide (10% solution) for fungus proved negative.

Oct. 1, 1912. A fresh crop (macular) came "all at once" on the legs. Repeated examinations for fungus, as before, were negative. The lesions faded extremely slowly until the immense ventral hernia, which formerly had not been properly supported, was securely bandaged, whereupon the lesions subsided much less slowly and the patient felt better in every way.

Further course: Recovery in about 2½ months, but the patient remained pale and reduced in weight (largely from worry and lack of food).

Treatment: Acid. salicylic, 2% ointment. Aspirin 0.3 gm. t.i.d. Borax baths. Sulphur ointment.

Case IV. (Jan. 20, 1913.) Miss S. Living at home. Age, 26.

She is frail and nervous and always has been so. She had scarlatina two years ago but there were no sequelæ. She has had more or less intestinal indigestion for many months. Fats and starches do not agree with her.

For a week prior to the onset of the present skin eruption the patient worked exceedingly hard at home and was very much worried over petty affairs. She had at that time recurrent vague pains in her left knee and left shoulder. She had never had these pains before. They still troubled her (mostly at night).

Her pityriasis rosea began with the primitive plaque on the left outer thigh, six weeks ago. It still existed and was oval and about the size of a dollar. It was followed shortly by successive crops of lesions, rapidly involving the covered parts of the body. The eruption was quite typical (macular and circinate) and extended from the level of her high collar to a short distance below her knees. She had been unusually "nervous" the past day or so. The lesions rapidly subsided. Recovery was complete 24 days after beginning treatment, or nine weeks after the onset of the disease.

Treatment: Resorcin and salicylic acid ointment (2%). Aspirin, 0.3 gm., t.i.d. Borax baths. Strychnine, iron, arsenic and cascara, later.

Case V. (Dec. 20, 1912.) Mrs. W; age, 31; brunette.

She is well nourished and has always had good health. She had five children in "rather rapid succession." For some months preceding the onset of her pityriasis rosea, she was nervous and "run down," as a result of her strenuous summer's exertions. Her summer's trials included troubles with servants and much work which she had to do herself by day, and disturbed slumbers nightly, caused by a wakeful child. At the time that the eruption first appeared and since then, she "has not felt as well as usual," and has pains in her left knee.

The patient was first seen one month after the appearance of the "primitive patch" (which was still present on the anterior surface of the left thigh). The lesions (at first macular, but becoming annular later) appeared in successive crops, gradually spreading over the thighs, abdomen, chest and axillæ. They were quite itchy most of the time; but the unaffected skin gave no subjective symptoms. Scrapings were examined carefully for a fungus, twice without success. The eruption subsided unusually slowly and did not disappear until about four months after its onset.

Treatment: 2% salicylic acid ointment, permanganate baths, carbolio, hamamelis and glycerin lotion; aspirin 0.3 gm. every 3 hours, for a brief period. The aspirin relieved the knee-joint pains, but had no effect on the eruption.

Case VI. (Oct. 3, 1910.) Mr. R. Age, 30; unmarried; blond.

Well nourished. Habits excellent. His past health has been good, excepting more or less intestinal indigestion. He is of a nervous type. He is prominent socially and very busy in that regard, in addition to being under a heavy nervous strain daily at his business. He takes good care of himself and bathes daily. For two or three weeks before his attack of pityriasis rosea, he was unusually busy socially, and after his day's work at the office, was quite fatigued. At that time his intestinal indigestion became very troublesome. The primitive plaque of pityriasis rosea came on the lower abdomen and persisted throughout the attack. It was followed shortly by macular lesions which gradually became circinate. These lesions were rather diffusely distributed over the covered parts of the body. Several scrapings were examined for fungus in the usual manner, with negative results.

The eruption remained about 4 weeks.

Treatment: Aspirin and sodium bicarbonate, 3% salicylic acid ointment and permanganate baths.

Case VII. (Dec. 9, 1911.) Mr. D., a book agent. Age, 25; a demiblonde. Unmarried; of splendid muscular development and usually in perfect health; he had a marked eruption of pityriasis rosea. He was of a very excitable and nervous type, and was more or less troubled with intestinal indigestion. For some weeks prior to the onset of his cutaneous eruption, he was exceedingly worried over financial affairs and had much indigestion. He was also "training" very hard for some athletic contests (but did not respond as usual to the training). He perspired excessively and took daily baths (fresh and salt). The primitive plaque appeared on the left lower abdomen. It was followed in two days by macules which very quickly spread over the covered parts of the body. Both types of lesions were present. The patient applied tincture of iodine to some of the areas and to some of the others, mercurial ointment. Both of these agents produced severe dermatitis. The eruption lasted five weeks in all. Several scrapings were examined for fungus without success.

Treatment: Salicin (0.3 gm. every 3 hours), restricted diet, saline laxatives, a carbolio acid, oil of sweet almonds and zinc oxide emulsion externally, and later liquor cresol comp., in diachylon ointment, for some dry itchy areas in both axillæ.

Case VIII. (Oct. 31, 1912.) Mr. C. Brunette; married, obese, pale and nervous, was rapidly advanced to a position of responsibility in a large bank. He worried a great deal over his new responsibilities, and for a long period did not sleep well. He smoked strong cigars almost constantly and every night indulged liberally in alcoholic beverages. The patient also worried much over the health of his two children who were quite wakeful at night. With all this he was obese and flabby. He tried to "reduce" by taking hot baths nightly and systematic exercise, followed by cold baths, daily. During several weeks of this work, he perspired excessively, even after slight exertion. It is interesting to relate that one year previously, while living under similar conditions, he had an attack of cheiropompholyx involving both hands.

The primitive plaque came on the left lower abdomen. Macular and then circinate lesions soon appeared thickly, but not strongly marked over the mid-region of the trunk. The eruption did not involve any other part of the body. During the course of the disease, the patient kept up his daily exercises and hot and cold baths. The disease persisted three weeks in all. Scrapings of lesions examined for fungus revealed none.

Treatment: Borax baths, 2% salicylic acid ointment and strychnine, arsenic and iron pills.

Case IX. (Dec. 29, 1911.) Mr. Z., a German. Age, 27, single, blond, of nervous temperament and fairly well nourished, had a typical eruption of pityriasis rosea. The eruption began with a primitive plaque over the right pectoral region and consisted of macules and circinate lesions thickly arranged over the upper thorax, shoulders, arms and half way down the forearms. This eruption lasted altogether about four weeks. The usual examinations for fungus were made with negative results. The patient had always had good health—but for a short while before his skin disease appeared, he was somewhat run down. This was brought on by his being “a stranger in a strange land” and on account of his lack of knowledge of the English language, he was having a very hard time getting along. He was out of work and consequently very much worried.

Treatment: 3% salicylic acid ointment with 3% sulphur, and permanganate baths.

Case X. (Jan. 11, 1913.) Miss H. Age 30, brunette, well nourished and apparently strong, though of a somewhat dissipated appearance, had a pronounced eruption of the macular type of pityriasis rosea. She had been subject to intestinal indigestion for several years and had had some very severe attacks recently. Within six months she had had what she called “ptomaine poisoning” and had been having more or less constant nausea, vomiting and other gastric distress after eating. Following this “ptomaine poisoning” she had many petechiæ scattered over her body and when she appeared for examination she had quite a few which had come recently.

The patient kept late hours and drank large quantities of alcoholic beverages daily. For two weeks prior to her attack of pityriasis rosea (during the Christmas season) she dissipated even more than usual and drank excessively of champagne. About ten days after this period of excesses she developed a primitive plaque on the right side of her abdomen which persisted throughout the attack. Macular lesions soon appeared thickly over the abdomen, the chest, and inner thighs. A few of the lesions became circinate. The eruption did not extend below the knee or above the level of the clavicle. It did not itch or burn. It lasted three weeks altogether. Syphilis was excluded.

Treatment: Rigid diet, saline laxatives, alkalis, borax baths and 2% salicylic acid ointment.

Case XI. (Jan. 23, 1911.) Mrs. L. Age, 35. Housewife, brunette, of robust appearance, had a prolonged attack of pityriasis rosea. She was subject to chronic constipation for which she had been taking a *teaspoonful of sand* three times daily for several months.

A typical primitive plaque came on the left breast and the characteristic eruption spread over the covered parts of the body. The complete duration of the disease was two months. Examinations for fungus gave negative results.

Treatment: “Sand” medication discontinued, rigid diet, bismuth subnitrate, magnesium carbonate and rhubarb, permanganate baths and 3% salicylic-sulphur ointment.

No affirmative conclusions can be drawn from these few records; but there are certain facts which deserve consideration. These patients all presented the pityriasis rosea (Gibert) eruption, typical in

its appearance and in its course. They all (excepting Case XI.) had experienced recent, definite severe nervous stress from prolonged excessive mental work, worry or actual nervous shock.

The sudden shock and injury in Case I. and the prompt appearance of the eruption on the day following, were particularly striking. Of course it cannot be said positively that a causative relationship existed between the two occurrences; but one is justified in thinking of it as a strong possibility. Jaquet, quoted by Szaboky, noted a case in which the attack seemed to have been induced by severe fright. Hyde mentions great fatigue as being a possible cause. Szaboky recorded some very interesting observations based on 119 cases which he had seen, and stated his belief that "the nervous phenomena, not heretofore mentioned in the literature, make it probable that the cause of the disease is to be sought in an alteration in the condition of the nerves of the skin. He noted functional nervous disturbances predominating in 66% of his cases.

Some of the patients in the writer's series have been troubled with excessive perspiration. All of them had more or less of the gastrointestinal disturbances, noted by various writers.

In view of the experience of different clinicians who have recorded nerve fatigue, shock, functional nervous disorders, gastrointestinal disturbances and other phenomena in association with the eruption of pityriasis rosea and considering the negative bacteriological and histopathological findings, it would seem that the disease must be a cutaneous manifestation of some generalized abnormal bodily condition.

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GENERAL DISCUSSION ON PITYRIASIS ROSEA.*

DR. FORDYCE opened a general discussion on this subject. He stated that the symptomatology of pityriasis rosea was fairly well understood. Occasionally, however, unusual types of the disease were encountered where the lesions were more or less localized or where they occupied unusual sites. In some cases, too, the lesions assumed a papular form and simulated closely the eruption of secondary syphilis. The speaker recalled two or three cases where it was difficult or impossible to say from the objective features that the eruption was not a secondary syphilis. By longer observation and by the employment of the Wassermann reaction the diagnosis was rendered positive. The eruption of pityriasis rosea, when it came under the observation of the clinician was sometimes much obscured by irritating applications and it sometimes simulated an eczema very closely. He had never been able to convince himself that local applications accomplish a great deal in limiting the duration of the trouble, though now and then a case was encountered where the eruption would disappear in ten days or two weeks under lotions containing bichloride of mercury and resorcin. At one time he thought that salol given internally limited the duration of the eruption, but further observation had not confirmed this opinion.

DR. SCHAMBERG said he thought the aspect of the subject we were most interested in was the etiology of pityriasis rosea. He had not the least idea as to the cause of this curious affection, but he desired to make brief mention of a finding which might be entirely without value, or, on the other hand, it might prove of some value. Upon cultivating the scales from a case of pityriasis rosea on a sterile slide which was placed in a moist chamber, a fungus grew up which was exhibited in a photograph presented. Possibly, it was due to a contamination.[†]

DR. ORMSBY said the problem of pityriasis rosea was a rather large one, and required individual work for its solution. While the eruption was sometimes localized and of a mild type, as Dr. Fordyce had said, he had seen cases where it was scattered over the entire body. While it was probably only a coincidence, he could recall several cases where syphilitic patients suffering from an intercurrent attack of pityriasis rosea remained entirely free from specific lesions for many years. He did not believe that syphilis had anything to do with this disease, but it seemed to occur comparatively often in old syphilitic patients. This was possibly due to the fact that these patients were as a rule unusually anxious regarding their condition, and that the appearance of any eruption would be very apt to induce them to consult a physician.

The speaker said that some believed in a parasitic origin of pityriasis rosea, and he thought that patients treated with a mild anti-parasitic ointment recovered a little more quickly than if left untreated. He had never seen any form of internal treatment have any effect upon the eruption.

DR. GILCHRIST recalled a case of pityriasis rosea in a medical student, when the eruption was in a very early stage. The eruption was only twenty-four hours old; the patient showed a few scattered, small, pin-head papules over the chest. One would at first glance have thought it was prickly heat. On the following day his body was covered with these papular lesions, pale pinkish in color; semi-

* A general discussion on the subject of pityriasis rosea by the members of the American Dermatological Association, 37th Annual Meeting, Washington, D. C., May 6-8, 1913.

† This fungus was later demonstrated in a second case studied in the same way, but was found to be a contamination from the vaseline employed to cement the corners of the cover glass.

globular, non-sealy, fairly firm, and apparently situated round the hair follicles. On the fourth day he presented the more typical picture of a pityriasis rosea, but of the macular and papular type with a few annular lesions and beginning to scale. The eruption persisted for two or three weeks, developing more and more circinate lesions, which gradually cleared up. There were some constitutional symptoms, with coated tongue, etc. In this case his assistant, Dr. Willock, examined the stools bacteriologically but nothing specific was found. The kidneys also functioned normally.

In another case, also a medical student, Dr. Gilchrist suggested, in connection with the treatment, the ingestion of large quantities of water, and under this treatment the eruption disappeared within five or six days. In a third case of this disease there were typical lesions about the thighs from which he took scrapings and found a fungus like that of the *microsporon minutissimum*, although the appearance of the lesions was typical of pityriasis rosea. His assistant, Dr. Strobel and himself had noted twelve typical cases of pityriasis rosea in syphilitic subjects, in the last few years.

Dr. POLLITZER called attention to a paper published two years ago by Dr. Udo J. Wile, who reported a case of pityriasis rosea with vesicular and bullous lesions in which Dr. Pollitzer said he made the diagnosis on the distribution of the lesions and their general characteristics, together with the course of the disease. Pityriasis rosea always showed some traces of an accumulation of serum in microscopic vesicles under the horny layer; in the case referred to, the exudation of serum was great enough to raise up the horny layer in visible blisters. The patient was a hard-working girl and the time a particularly hot summer when there was normally a high degree of hyperemia of the skin. Such cases of bullous pityriasis rosea are possibly less rare than this unique report would indicate.

As to the ætiology of this disease, the speaker said there was a time when he felt very sure that the disease was due to a local parasite. He never believed that it was a form of ringworm (a view which was still held by the majority of the Viennese school) because that organism was too easily demonstrable to have escaped observation; but the course of the disease, the common occurrence of a preliminary lesion—the primary patch of Brocq—which was present in about one-half the cases and preceded the general eruption by a week or two, then the generalized eruption, the shape of the lesions and their peripheral spread up to a certain point, all spoke in favor of a parasitic cause. Of late years, however, he had rather given up the belief in a parasitic origin of the disease, and he was doubtful as to its ætiology. The complete failure to demonstrate the presence of any organism was of course very much against its parasitic origin, though it was by no means a fatal objection. The general course of the disease, however, its rapid, almost abrupt development, its disappearance in a fairly definite and rather short period spoke very strongly in favor of its being some systemic disorder. In the absence of any local organism he felt inclined to accept the view that we had in pityriasis rosea—a real exanthem, like measles for instance—a systemic disorder with cutaneous manifestations.

Dr. HARDING said it seemed to him that resorcin had a beneficial effect in the form of a mild ointment, three or four per cent., particularly if combined with zinc oxide.

Dr. GEORGE H. FOX said that while he did not believe that pityriasis rosea was of parasitic origin, he could throw no light upon its ætiology. It seemed to be a systemic disease, allied to the exanthemata and was as little controlled by local treatment. In some cases where the eruption was annoying, a mild ointment containing two or three per cent. of salicylic acid, was as good as any. This discussion reminded him of the fact that at a meeting of this Association here in Washington many years ago, he showed about fifty or sixty photographs of various erythematous and squamous eruptions, including pityriasis rosea and

allied affections, and claimed that many of these were related to each other and suggested that they might be classed together under some term like pityriasis. His suggestion to associate these various eruptions was jeered at; some thought that he was tearing down the very bulwark of dermatology, and declared that pityriasis rosea was a clearly defined and distinct clinical entity. In spite of this, Dr. Fox said, he continued his clinical studies and became more and more convinced that he was right in associating these various eruptions. Last year, at the meeting of the American Medical Association, he presented a paper in which he suggested that there was a relationship between pityriasis rosea and many skin affections of the axilla and groin which were usually called eczema marginatum, or dermatitis seborrhœica, and he was greatly surprised that his views met with general favor.

As to the symptomatology of pityriasis rosea, most of the text-book writers on dermatology had accepted the incomplete description by Gibert as unalterable. As a matter of fact there is found in this disease, not only furfuraceous macules as described by Gibert, but many circinate lesions, and often a general punctate or guttate eruption. The disease may affect various portions of the body as well as the upper portion of the trunk, and while often running its course in two months it may become chronic and persist for many months.

Dr. HARTZELL said there were one or two factors concerning pityriasis rosea that rendered its parasitic origin extremely doubtful. The short, self-limited course of the disease militated against that theory, and he was rather inclined to believe that it was a systemic affection.

The speaker said no mention had been made of other scaly, circinate eruptions which resembled pityriasis rosea, but in which the diagnosis seemed open to doubt. As to the treatment of this disease, his own experience would lead him to the conclusion that treatment had not the slightest effect upon it, excepting in those cases, not at all infrequent, where irritating local remedies had been applied and had given rise to a violent dermatitis.

Dr. PUSEY said he was quite in accord with what had been said in regard to the apparent lack of effect of any of the various methods of treatment that had been recommended in pityriasis rosea. As to the symptomatology, he could recall cases where the eruption was at variance from that usually regarded as typical. He had also seen cases where the disease terminated in less than three weeks and as there is nothing but the clinical picture upon which to make the diagnosis he felt some uncertainty in an occasional case in differentiating it, particularly from seborrhœic eczema.

As to the ætiology of pityriasis rosea, the speaker said he had been impressed with the view expounded by Dr. Pollitzer, that it was a systemic infection, closely resembling a macular erythema. All the patients usually wanted was the assurance that it was nothing serious. The speaker called attention to the tendency of the disease to occur in groups. For example, he had seen a great many cases of pityriasis rosea during the past winter, and again, one might go on for a long time without seeing any cases.

Dr. McEWEN said that during the month of April of this year he saw a large number of cases of pityriasis rosea, both in the clinic and in private practice, and it had occurred to him that there might be a seasonal relationship to account for this. At a recent meeting of the Chicago Dermatological Society, one of the members reported that he had seen the husband and wife affected at the same time.

Dr. RAVOGLI said that he too belonged to the Vienna school of dermatology. He had long held the same view as that formerly held by Dr. Pollitzer, namely, that pityriasis rosea, or, as they called it in Vienna, herpes tonsurans maculosus, was of parasitic origin. He recalled cases of this affection in patients who frequented public bathing establishments, where the eruption, on careful investigation, proved to be herpes tonsurans or erythrasma from *Microsporon minutis-*

simum. The disease disappeared in the course of a few weeks under a little antiparasitic ointment. In a recent typical case of pityriasis rosea, he scraped off some of the scales, and under the microscope found some small spores.

With reference to the general symptoms of these patients, Dr. Ravogli said it had been shown that in *tinca capitis favosa* and also in scabies, where the effect of the organisms is essentially local, there was some deviation of the complement showing the tendency of the general system to form antibodies. This shows that any irritating substance, especially of parasitic nature, is capable of producing reactions, whereby the system makes effort to protect itself from the intruding poisonous elements.

DR. BRAYTON said he had been accustomed to regard pityriasis rosea as a local exanthem. The fact that a number of cases occurred at certain seasons would strengthen that view. The same was true of lichen planus. The speaker also called attention to the fact that lichen planus was seen more frequently in private practice than in the clinic. The possibility of mistaking pityriasis rosea for lues had been considered in special papers. As to treatment, the chief indication was rather to avoid over-treatment, of which he had seen a number of instances, in some of which carbolic acid preparations or adhesive plaster had been ordered by the attending physician.

DR. HAZEN said he had done some blood work in connection with pityriasis rosea, and in ten cases there was absolutely no increase in the eosinophilia or change in differential count. In the negro cases they saw in Washington, the eruption was usually not very widespread, and was more apt to be localized on the neck and chest. In one case which he saw, it was complicated by a dry pleurisy, while tonsillitis or pharyngitis preceded or accompanied the eruption in at least 60% of the cases.

DR. WINFIELD said he could never convince himself that pityriasis rosea was of parasitic origin. In many cases he had noticed that the eruption was complicated by tonsillitis or some other form of sore throat, in which respect it resembled some of the exanthemata. He had also observed that they were more common in certain seasons of the year, and he had seen many cases during the past winter. He did not recognize a chronic type of pityriasis rosea, and thought that those cases must be something else. As to treatment, he had never found that anything did these patients much good excepting applications to relieve the itching, such as resorcin.

DR. DYER said that he had been interested for a number of years in pityriasis rosea, and more particularly in its aetiology, the reason therefor being that twice within the past fifteen years he had suffered from this type of eruption, and on both occasions it came on after a visit to a Turkish bath. This led him to suspect that it was a parasitic disease. The first three cases he ever saw of this affection came on after the patients had visited a public bath in the city of New Orleans. After that he saw a group of four cases in patients who had visited a Turkish bath, and a few days later, two of the attendants at that institution were similarly affected. Possibly, these cases may have been ringworm, but the speaker said that, to him, they were clearly cases of pityriasis rosea clinically, and no parasites were found. His belief in the parasitic origin of the disease had continued, and he had always treated these patients from that viewpoint. His patients usually were well within ten days—rarely longer than two weeks. If a ringworm was so mild in its parasitic virulence as to disappear of its own accord, why was it not possible for pityriasis rosea to be parasitic and wear out its virulence and disappear? In many respects it bore a close resemblance to the parapsoriatic disease.

Discussing the treatment of pityriasis rosea, Dr. Dyer said his method was to order a daily bath of potassium sulphuret, using as much as two ounces to the bath of 30 gallons, followed by a mild, anti-parasitic ointment. Under this method of treatment the eruption usually disappeared within a week or ten days.

TUBERCULIN THERAPY IN TUBERCULOSIS CUTIS,
TUBERCULIDES AND ALLIED CONDITIONS:
A PRELIMINARY REPORT.*

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Columbia University.)

THE report contained herein is based upon a series of observations which was made in Dr. Fordyce's clinic and which covered a period of four years. On the whole, the result of the work has been a disappointment for several reasons in general and two reasons in particular. In the first place, tuberculin was found not to be efficacious when, as a result of a study of the literature, superior results were expected from it. Secondly, it has been impossible, thus far, to study a sufficiently large number of cases to compile valuable or accurate statistics. The work, however, will be continued over a number of years with the idea of ultimately ascertaining the relative values of the different preparations of tuberculin and the various methods of employing the tuberculin products, such as the use of Koch's old tuberculin, bacillus emulsion, tuberculin filtrate, etc., both by subcutaneous injection and by local application to the lesions; and, also, to determine the effect of the treatment upon the various manifestations of cutaneous tuberculosis and allied conditions.

This contribution, then, must be considered as a preliminary report, as it embraces the use of only the bacillus emulsion, and does not include a resumé of the literature.

TECHNIQUE.

Bacillus emulsion is usually supplied in 1 cc. glass bottles with a rubber cork, which is covered with wax. The emulsion contains a minute proportion of carbolic acid and, in the original package, will not deteriorate for several months. After the bottle has been opened however, and part of its contents removed, the remnant must be employed within one or two months.

* Read before the 37th Annual Meeting of the American Dermatological Association, Washington, D. C., May 6-8, 1913.

Inasmuch as the first dose is exceedingly small and must be slowly increased with each injection, a series of dilutions is necessary. As a diluent there is nothing better than the following: sodium chloride, 8.5; carbolic acid, 5; distilled water, to make 1,000.

DILUTIONS AND DOSAGE. The dilutions and dosage of each dilution will be given first; the explanation will follow:

Bacillus emulsion: dosage; 10, 12, 15, 19, 24, 30, 37, 46, 57, 71, 89.

Solution A, 1-10. Made by adding 1 cc. B.E. to 9 cc. diluent. Dosage: 42, 52, 65, 81.

Solution B, 1-25. Made by adding 1 cc. B.E. to 24 cc. diluent. Dosage: 54, 67, 84.

Solution C, 1-50. Made by adding 1 cc. B.E. to 49 cc. diluent. Dosage: 56, 70, 87.

Solution D, 1-100. Made by adding $\frac{1}{2}$ cc. B.E. to $49\frac{1}{2}$ cc. diluent. Dosage: 12, 15, 19, 24, 30, 37, 46, 57, 71, 89.

Solution E, 1-1,000. Made by adding 1 cc. Sol. D. to 9 cc. diluent. Dosage: 22, 27, 34, 43, 54, 67, 84, 100.

Solution F, 1-5,000. Made by adding 1 cc. Sol. D to 49 cc. diluent. Dosage: 58, 72, 90.

Solution G, 1-10,000. Made by adding $\frac{1}{2}$ cc. Sol. D to $49\frac{1}{2}$ cc. diluent. Dosage: 48, 60, 75, 93.

Solution H, 1-25,000. Made by adding 20 cc. Sol. G to 40 cc. diluent. Dosage: 61, 76, 96.

Solution I, 1-50,000. Made by adding 10 cc. Sol. H to 40 cc. diluent. Dosage: 5, 62, 78, 97.

Solutions I, H and G will deteriorate in one week; Solution F in two weeks; Solution E in about three weeks. The stronger solutions will keep for a month. The figures signifying dosage represent hundredths of a cubic centimetre.

DOSAGE. At first an arithmetical scheme was followed, but it was soon found that reactions were less frequent and the results better when the dosage was computed according to geometrical progression, at the rate of 25 per cent. per injection. The dose-table contained herein is based upon this idea. The first dose is $\frac{1}{2}$ cc. Sol. I; the second, 0.62 cc.; the third, 0.78 cc., and the fourth, 0.97 cc. The fifth dose is 0.61 cc. Sol. H, etc. By having a large number of dilutions it never becomes necessary to employ over 1 cc. of fluid for an injection. Any one cubic centimetre syringe divided into hundredths will answer the requirements of the treatment. To ascertain correctness of the next higher dose, multiply the last dose by 1.25. To obtain the first dose of the next stronger solution,

divide the last dose of a given dilution by the increase in strength of the next dilution, then multiply this result by 1.25.

The injections are to be given every 5 to 7 days and continued until the disease is cured or a reaction at the site of injection is noticed. In the latter instance the treatment should be discontinued for a few weeks and then recommenced with smaller doses.

DISEASES TREATED AND RESULTS OBTAINED. A total of 52 cases was treated:

Lupus vulgaris	12
Tuberculosis verrucosa cutis	3
Tuberculosis of buccal mucosa	1
Scrofuloderma	4
Tuberculous adenitis	4
Bazin's disease	8
Tuberculous dactylitis	2
Papulo-necrotic tuberculide	12
Lupus erythematosus	6
<hr/>	
Total	52

Of the 12 cases of lupus vulgaris, 5 exhibited large, flat, atrophic lesions, containing embedded apple-jelly nodules. One of these patients recovered after 18 months of treatment. She has remained well 2½ years. A similar case has remained well for 1½ years. The third case recovered at the end of 2 years' treatment and has remained well for 8 months. The fourth case has been under treatment for 8 months and has markedly improved. The fifth case has been under treatment for nearly a year and there has been no improvement at all.

There were 4 cases of ulcerating lupus vulgaris and they all failed to recover even after 2 years of treatment. For a while improvement was observed under a combination of streptococcic and staphylococcic vaccine with the tuberculin, but the improvement was only temporary.

There were 3 cases of hypertrophic lupus vulgaris without ulceration and they all recovered after 18 to 20 months of treatment and have remained well for over a year.

The 3 cases of tuberculosis verrucosa cutis all presented small lesions on one finger. The lesions were verrucous and there was no



Fig. 3.
Lupus vulgaris before tuberculin treatment.



Fig. 4.
Same case as shown in Fig. 3, after tuberculin treatment.



Fig. 1.
Bazin's disease before tuberculin treatment.



Fig. 2.
Same case as shown in Fig. 1, after tuberculin treatment.

evidence of ulceration. These patients improved but were not well after 4, 6 and 9 months of treatment. They, then, unfortunately, failed to continue the injections.

The single instance of tuberculosis of the mucous membrane was a tuberculous ulcer of the mucous membrane of the cheek. There was no improvement after one year of treatment.

Of the 4 cases of scrofuloderma, 3 were in children between the ages of 3 and 5 years and were associated with ulcerative tuberculous adenitis. The remaining case was a girl of 9 years, who exhibited an ulcer on the cheek, close to the ear. None of these cases remained under treatment more than 4 months, so that reliance cannot be placed upon the results, which were entirely negative. Both tuberculin and polyvalent, mixed vaccines were utilized.

The 4 cases of non-ulcerating tuberculous adenitis were all children with marked enlargement of the cervical glands. These little patients were irregular in attendance and only remained under observation for a few months. There was, perhaps, some improvement in each instance.

Of the 8 cases of Bazin's disease, 3 exhibited ulcerating lesions. They were all girls from 18 to 20 years of age. Every one of these patients recovered in from 6 to 10 months of tuberculin treatment. Most of the cases were of at least one year's duration and one girl had not been free of lesions at any time for over two years. There has been only one relapse which was very mild and occurred 8 months after recovery. This slight relapse promptly disappeared under tuberculin treatment. She has remained well up to March, 1914. The longest lapse of time since recovery in these cases is 3 years, the shortest is 6 months.

The 12 cases of papulo-necrotic tuberculide were all adult females, who exhibited an extensive distribution of the lesions. There was only one exception to this—a woman with lesions limited to the hands, in which there was some question regarding the diagnosis. All these patients gave a positive von Pirquet reaction. The results here were entirely negative in spite of the treatment: in some instances, being continued for over two years. This refers, of course, to the end-result. In the course of the two years there were many times when there was comparative freedom from the lesions, but relapses were as common at the end of the long-continued treatment as in the beginning.

Of the 6 cases of lupus erythematosus, 2 were of the disseminate and 4 of the discoid variety. Both of the disseminate and one of the discoid cases gave positive von Pirquet reactions, while the 3

remaining cases were negative. As was expected, long-continued tuberculin treatment failed to produce any discernible effect.

Now, to give these results in a concise manner: with but two exceptions all the cases of non-ulcerating lupus vulgaris were cured; one is improving and one is not. None of the cases of ulcerating lupus vulgaris was affected. The cases of tuberculosis verrucosa cutis improved but should be omitted because they failed to remain under observation. The one case of ulcerating tuberculosis of the mucous membrane failed to respond. The cases of scrofuloderma and ulcerative tuberculous adenitis were not affected, but the treatment was too irregular and lacked the necessary perseverance to allow one to arrive at any conclusion. The same can be said of the non-ulcerating tuberculous adenitis, although here there did appear to be some response. Every case of Bazin's disease was cured, with only one slight relapse. Finally, there was no response in the cases of papulo-necrotic tuberculide and lupus erythematosus.

COMMENTS.

These results are rather curious. A perusal of the literature, for instance, shows that it is the consensus of opinion that tuberculin immunizes against the products of the tubercle bacilli, but does not cure tuberculosis nor protect an individual from contracting the disease. Also, that one preparation of tuberculin is as efficacious as another.

The small amount of work represented in this report will not allow of a very valuable discussion regarding the first opinion and, of course, adds nothing to the second statement unless combined with other reports found in the literature.

It will be noticed that in this series, true tuberculosis of the skin apparently completely recovered under the influence of tuberculin injections. This would indicate that tuberculin, under certain circumstances, at least, or in favorable cases, can cure tuberculosis of the skin. Why, in two apparently similar cases, one should respond and the other fail to improve at all is hard to explain at the present moment, excepting on the ground of a spontaneous cure.

All the cases of ulcerative tuberculosis of the skin and mucous membrane failed to yield to tuberculin. At first this was thought to be due to the activity of complicating organisms, and perhaps it is, but these lesions failed to respond to a combination of tuberculin and mixed, polyvalent stock vaccines. Naturally, no great

value can be attached to this observation until autogenous vaccines are employed.

It is curious, however, that while ulcerative lupus failed to respond at all, the ulcerative lesions of Bazin's disease yielded at once. This, of course, might be due to the fact that the individual lesions of erythema induratum are of relatively short duration. But there seemingly can be no question regarding the influence of tuberculin upon this disease and an explanation of this fact may be that it is, as is now generally conceded, a very benign form of tuberculosis. In fact, a review of the cases herein reported would seemingly indicate that tuberculin might be curative in benign tuberculous affections of the skin and useless, or of only slight service, in the more malignant types. Finally, the fact that conditions, such as lupus erythematosus and papulo-necrotic tuberculide, which are thought to be due to the products of tubercle bacilli rather than to the organisms themselves, failed to respond, would appear to point to the fact that tuberculin does not immunize against tuberculin, but seems to exert its influence upon the bacillus or to modify the soil upon which the organism grows. Apparently, too, tuberculin is unable to influence the tuberculous focus from which are derived the products which injure the skin.

At the present moment it will not be profitable to prolong the discussion for too many questions can be asked that cannot be answered. In this connection, however, it should be remembered that various authors have claimed superior results in the tuberculin treatment of the various direct and indirect tuberculous manifestations of the skin.

In conclusion it may be stated that in this series of cases nothing but tuberculin was employed. There was no local or general treatment.

DISCUSSION.

DR. HARTZELL asked what the reader of the paper meant by the statement that cases of lupus erythematosus failed to respond to the treatment? Whether he meant that they were not affected curatively or not at all?

DR. MACKEE replied that they were not affected at all.

DR. ORMSBY said that Dr. MacKee's paper was very interesting, both from a therapeutic and diagnostic standpoint. Many years ago, he did some work in connection with Bazin's disease, and he was glad to hear rather strong corroborative proof that that disorder, at least in some instances, was tuberculous in origin. It was also interesting to learn that the tuberculides were negative, a fact that he had personally seen demonstrated. About a year ago he saw a case of folliculitis with tuberculous adenitis, in which the lesions became much worse under the use of tuberculin.

The speaker said he was pleased to learn that lupus vulgaris was benefited by this treatment, which was contrary to the general belief, probably based on the fact that most of us did not have the patience to continue the treatment for so long a time. Cases of scrofuloderma had been reported which were supposed to have improved under a mixed treatment, but this did not agree with what Dr. MacKee told us.

Dr. GILCHRIST said that a year ago, at the Manchester Clinic in England, he saw thirty or forty cases of lupus vulgaris in one day, a number of which had been treated with tuberculin ointment, and some of them had done very well under it. The results were very similar to those reported by Dr. MacKee.

With reference to Bazin's disease, the speaker thought that the tuberculous nature of that disease had been proven. Some years ago he wrote a paper on the subject and reported a case in which, while he could not find the tubercle bacilli, he demonstrated the tuberculous nature of the lesion by inoculation experiments in guinea pigs. Dr. Gilchrist thought we should give the tuberculin ointment a more thorough trial. In the case of a colored girl where he had used it, the results were very good.

Dr. RAVOGLI, speaking of tuberculin, said he had read reports in Italian journals of dermatology to the effect that Prof. R. Campana in the Clinic of the University at Rome treated lupus vulgaris with injections of tuberculin and the application of the Finsen light, and he claimed that the results of this treatment were very satisfactory and rapid, so that these patients could be discharged as cured within a few months.

The speaker said he had used tuberculin years ago, with benefit in some cases, but he recalled two cases where the results did not encourage him to continue its use.

Dr. HAZEN said that Dr. Manning, of Washington, made applications of old tuberculin to the skin and then applied the positive pole of a galvanic battery to drive it in. Some patients gave a marked tuberculin reaction following this treatment.

Dr. FORDYCE said he recently saw a case of lupus of the cheek, of many years' duration. This patient was one of the group of cases treated by Dr. Friedmann with his turtle vaccine. He received two intramuscular injections of the vaccine; these had no effect on the lupus lesion, but at the site of the injections he developed two abscesses about the size of hen's eggs.

In connection with Bazin's disease, to which some of the speakers had referred, Dr. Fordyce called attention to the fact that these cases often got well by rest in bed, without other treatment.

Dr. POLLITZER also referred to the fact that Bazin's disease might get well without treatment in the course of time mentioned by Dr. MacKee, namely, seven or eight months.

Dr. MacKEE, in closing, said that in the cases of Bazin's disease he reported, the patients did not rest; they were kept at their work, and the sole treatment was the use of tuberculin. In four of the eight cases the lesions had existed for at least a year, and in one of the cases for two years. It was true, the speaker said, that the lesions of Bazin's disease might heal spontaneously, but new lesions frequently developed. In the cases he had reported the patients, with one exception, where there was a slight relapse, remained well.

In concluding his remarks, Dr. MacKee said that this was simply a preliminary report, and very incomplete. It would require a much longer time, at least five years, to accumulate a sufficient number of cases to give the report a scientific value.

SOCIETY TRANSACTIONS.

THE NEW YORK DERMATOLOGICAL SOCIETY.

Regular Meeting, Nov. 25, 1913.

JOHN A. FORDYCE, M.D., *President*.

GRANULOMA ANNULARE. Presented by DR. MACKEE for DR. FORDYCE.

A. M., female; age, 27; single; born in Ireland, nursemaid by occupation. The patient was from Dr. Wise's service at the Vanderbilt Clinic.

FAMILY HISTORY. Negative.

PAST HISTORY. The patient had always been well with the exception of occasional attacks of rheumatism in the elbows and knees. The first lesion of granuloma annulare occurred on the index finger of the left hand one year ago. New lesions soon developed on the hands, arms and ears. Each lesion at first consisted of a minute nodule, which by peripheral extension with clearing of the centre, or by coalescence of lesions, formed annular and crescentic configurations, ranging in size from a pinhead to a 50 cent piece.

The X-ray had been applied to several of the lesions by the intensive method and it was found that one treatment would cause the complete involution of the tumors.

CONDITION WHEN PRESENTED. There was a crescentic-shaped lesion on the right index finger which extended from the nail to the articulation of the proximal and middle phalanges. It involved the anterior and inner surfaces of the finger. It was elevated about $\frac{1}{4}$ of an inch above the niveau. The appearance was that of ivory with a slight violaceous tint. To the touch the tumor was firm. The surface was smooth. There was a similar lesion, only annular in shape, on the outer surface of the left small finger; this was the size of a 25 cent piece. On several of the fingers, in the regions of the elbows and on the lobes of the ears, were nodules ranging in size from a pinhead to a split pea. All of these lesions showed central depressions.

HISTOPATHOLOGY (from the Dermatological Laboratory). The essential changes consisted of an atrophy of the epidermis with a loss of the interpapillary pegs. In the corium there was a marked increase in fibroblasts around the blood vessels. The vessels in many of these areas were obliterated, giving rise to a central necrosis.

DR. FORDYCE said that few cases of the so-called granuloma annulare had been reported in this country. He had personally seen two cases besides the one shown this evening. In one of them he had excised a piece of tissue and had found the typical histological condition described by the English writers.

LUPUS VULGARIS OF THE FACE AND TUBERCULOUS ULCERATION OF THE MOUTH. Presented by DR. FORDYCE.

The patient, a man 51 years of age, had had for years on the right side of his face a lesion which suggested a very flat lupus vulgaris. This lesion was of about ten years' duration. About eight months previously he had developed a swelling back of the molar tooth of the upper jaw, which opened and discharged some secretion, and finally became an ulcer. An ulcer of the uvula and right tonsil developed subsequently. An examination of the chest showed some evidence of pulmonary tuberculosis. The Wassermann reaction was negative.

DR. SHERWELL said that it looked like a case of lupus erythematosus. He had shown a similar case at the Laryngological Society which began circum-orally and went through the whole mucous membrane of the buccal cavity, destroying as it went,—taking out a crescentic piece from the epiglottis,—and gradually lessening in destructive action down to the bifurcation of the trachea. He advised that this case be watched very carefully. The case to which he had referred was in a healthy looking girl, and the process lasted for years. At the time, he called it lupus erythematosus. The patient was apparently well the last time he saw her, and had gained in flesh, general appearance, etc.

DR. TRIMBLE said that he had never seen a case of lupus as flat as this, nor had he seen lupus erythematosus with such a coppery hue. He thought the lesion of the face was a lupus vulgaris of a mild type. It was well known that syphilis produced ulceration of the throat and oral cavity more frequently than any other disease; aside from that fact, he did not think that in cases of mucous membrane ulceration one could make the diagnosis with absolute certainty from the clinical appearance alone. In the last two or three years he had had five cases of tuberculosis of the tongue and mouth, and he had noted two clinical features of diagnostic import. One was that tuberculous ulcers were more superficial and had a tendency to spread slowly at the periphery rather than to go deeply into the tissue as did those of lues. A second feature was the appearance on the floor of the tuberculous ulcer of a number of small pin-head, yellowish white specks, which were probably minute areas of necrosis and perhaps analogous to the tubercles of the skin lesions. He agreed with the diagnosis of tuberculosis of the mouth.

DR. WHITEHOUSE agreed with Dr. Trimble, and thought that there were isolated parts which suggested lupus vulgaris. There was quite a sharp demarcation which could be appreciated. Certainly, the therapeutic test to eliminate syphilis had been thorough, but it would seem that a microscopic and tuberculin test should be able to establish the diagnosis beyond dispute. So far as the investigation had gone, it pointed more to a tuberculous process, as would also the condition found in the lungs.

DR. FORDYCE said that he would scarcely expect lupus vulgaris to exist in one place for ten years without producing atrophy. On glass pressure, small brownish-red tubercles remained, which strongly suggested lupus.

CASE FOR DIAGNOSIS. Presented by Dr. TRIMBLE.

The patient was a man, 42 years of age, born in England. On the chest, just to the right of the median line, there was a small non-irritated patch, about the size of a silver quarter, pale pink in color, the border being sharply defined against the healthy skin. A Wassermann reaction was negative. A microscopical section was shown. At the time of the biopsy, the lesion bled considerably, which seemed to relieve the congestion, as it had faded perceptibly. The lesion had been present for five months.

DR. FORDYCE thought one might trace the process better in a series of sections.

DR. JONXSTON said there was nothing to indicate epithelioma in the microscopical specimen. If, however, another were taken through the pearly waving line visible near the periphery, a rodent ulcer might be found.

CIRCINATE SYPHILODERM. Presented by Dr. SCHWARTZ.

The patient, a man 36 years of age, gave a history of having had a sore on the penis twenty years ago, which lasted for three weeks, but which responded readily to medication, healing after a week's treatment. He had had gonorrhœa thirteen years ago; no other venereal history. The eruption began on the face and side of the neck in May, 1913; there were no itching or other subjective symptoms; it had not materially changed since, and consisted mainly of a superficial circinate erup-

sion with slight atrophy where the lesion had progressed. Here and there, however, were small, erythematous, scaly patches, very slightly infiltrated, somewhat resembling lupus erythematosus. On July 4th, he went bathing at the sea-shore and was severely sunburned, particularly on the back of the neck just above the edge of the bathing suit. Shortly afterward, similar circinate lesions appeared, the eruption being sharply limited below in a semi-circular manner, where the edge of the bathing suit had protected the skin. The eruption on the back was accompanied by considerable itching, and had remained practically unaltered since its appearance. The man was treated at first for possible lichen planus, without any particular result. The Wassermann, made later, was negative, but that may have been due to the fact that when treated for the lichen planus he was given small doses of bichloride of mercury for two months. This had no influence on the eruption itself, but may have affected the Wassermann. Biopsy showed the typical perivascular sheathing of round cells, characteristic of syphilitic lesions. The infiltration was not limited to the papillary body, as in lichen planus, and the absence of epidermic changes would seem to exclude lupus erythematosus.

DR. HOWARD FOX agreed with the diagnosis, and said that it was a most extraordinary clinical picture.

DR. KINGSBURY also agreed with the diagnosis and said that it was a most interesting case.

DR. TRIMBLE said that if he had seen only the patient's face he would certainly have made a diagnosis of lupus erythematosus. There were also chronic scaly lesions on the scalp which strongly resembled lupus erythematosus. The large group of coalesced rings on the back was the puzzling feature. He did not wish to venture an opinion on this lesion, except to say that the preceding sunburn might have greatly modified the original disease.

DR. WHITEHORSE said that the circinate infiltrated lesions on the back did not look like erythematous lupus. The lesions on the top of the head and face looked more like lupus erythematosus. All had seen cases of syphilis on the face which could not be distinguished from lupus erythematosus. He had seen sunburn develop lupus erythematosus, but it did not have the raised border and circinate character that this eruption had. Of the two, he inclined to the diagnosis of syphilis.

DR. SCHWARTZ said that when he first saw the case he thought of lupus erythematosus, of lichen planus annularis, and of syphilis, but in view of the negative history of lues and the result of the Wassermann test, he was inclined to look upon it as lichen planus annularis. The biopsy, however, absolutely excluded that, and showed the infiltration which we only get with syphilitic lesions. The patient had received one injection of salicylate of mercury, and the lesion was already flattening out.

CASE FOR DIAGNOSIS (PRURIGO NODULARIS?). Presented by Dr. TRIMBLE.

The patient was a man, 73 years of age, born in Germany, and had been in this country for forty-nine years. Three years ago, following an attack of "stomach trouble," a severe pruritus developed over the whole body, more intense on the lower extremities. The eruption appeared at first on the legs, then on the thighs, buttocks and back, successively. When shown, the patient presented a very extensive area of affected skin, thickened and pigmented, with numerous nodules scattered here and there, varying from the size of a split pea to that of a hazel nut. They were irritated and torn by scratching, and numerous blood crusts were apparent.

DR. JOHXSTON thought it was a case of prurigo nodularis. The only other condition to be borne in mind was the possibility of its being an early stage of mycosis fungoides. The diagnosis of prurigo was based on localization, keratinization, pigmentation, and the undoubted presence of large scratched nodules.

Dr. HOWARD FOX did not think it necessary to fall back upon either prurigo or mycosis fungoides for a diagnosis. He thought the condition was senile pruritis, in which the objective symptoms of excoriation, pigmentation, thickening of the skin, etc., were all simply the result of prolonged scratching.

Dr. JACKSON agreed with the diagnosis of pruritus senilis. Lichenification as the result of chronic scratching was often seen.

Dr. SCHWARTZ said that from the clinical picture he would agree with the diagnosis of prurigo nodularis, due to some chronic intoxication.

Dr. TRIMBLE said that some of the gentlemen desired to know if there was any sugar in the urine. The examination had been made by Dr. Snyder, while some of the other cases were under discussion; it was negative. Dr. Fox's explanation of the condition seemed a good one, but it did not fit in with the nodules scattered here and there. One did not usually see bluish nodular tumors scattered over the extremities in the general run of senile pruritus cases.

MULTIPLE BENIGN CYSTIC EPITHELIOMA. Presented by Dr. MacKEE for Dr. FORDYCE.

The patient, A. P., female, age 31, born in Austria, was presented through the courtesy of Dr. Roscn.

FAMILY HISTORY. Her mother and father, two sisters and one brother were living, none having had a similar or any other disease of the skin.

PAST HISTORY. About one year ago, she noticed two small tumefactions of a dark-red color, on the upper left eyelid; they were not painful; these remained unchanged for about three weeks, and then the color gradually faded to that of the normal skin. These small tumors increased in number until they were scattered over both orbital, temporal, frontal, post-auricular and sterno-mastoid regions.

GENERAL DESCRIPTION. The lesions varied in size from that of a pinhead to that of a pea; they were closely studded in the orbital region and more discrete in the other locations. The color was that of normal skin; some were a shade lighter and some a trifle darker. Many of them showed at their summit, milium bodies. They were firmly imbedded; the base was broad and in direct continuation with the normal skin; they were hard, raised above the level of the skin, in some instances a little over an eighth of an inch, and were waxy and lardaceous in appearance. There was a coalescence of some of these tumors, particularly in the orbital region, giving it a plaque-like appearance. Upon palpation one gained the impression of a rough, graty surface; this was particularly marked in the frontal region.

HISTOPATHOLOGY (from the Dermatological Laboratory). The important changes consisted of an increase of the lanugo hairs with a proliferation of the basal epithelium of the follicle. There were, also, areas of basal cell proliferation in the epidermis. Numerous cysts were found in the follicular epithelium and in the epidermis. Diagnosis—trichoepithelioma.

Dr. FORDYCE said that in this case the section showed that the proliferation started from the epithelial layer of the follicle. The case was one of exceeding interest.

EPITHELIOMA OF THE LIP TREATED WITH THE X-RAY. Presented by Dr. MacKEE.

The patient was from Dr. Wise's service at Dr. Fordyce's clinic. He was a single man, 60 years of age, born in the United States, a carpenter by occupation. He came under observation first three months ago, when he presented a crusted lesion of the lower lip, extending from the left commissure to within $\frac{1}{2}$ inch of the right commissure. The crust was thick, hard, irregular, black and

very adherent. There was some infiltration of the underlying tissues. There was no glandular involvement. The speaker said that a histological examination had not been made so that a definite diagnosis had not been established. That the lesion had passed beyond a seborrhœa there could be no doubt, but it was questionable if it could be called an epithelioma. Präepitheliomatous degeneration or a transitional stage between seborrhœa and epithelioma probably represented the true condition.

The crust was removed with difficulty, leaving an irregular, hard, verrucous, bleeding surface. One application of the X-ray, consisting of 18 Holzknœcht units of a Benoist No. 9 or 10 ray, filtered through 3 millimetres of aluminium, was made. This affected a complete resolution of the lesion with the exception of a patch of leukoplakia close to the left commissure.

The speaker said that the X-ray was very efficacious in epithelioma of the lip when the deeper tissues were not involved. In deep-seated cases, especially when the growth was circumscribed, he thought surgical ablation with post-operative radiotherapy was the proper procedure.

Dr. TRIMBLE told of a case of a small keratotic lesion on the vermilion border of a man's lip which had been present for a year or so. The patient was now 35 years of age, and had been seen by one or two members of the Society. He was somewhat undecided as to the method of treatment to pursue in the case. Sutton, of Kansas City, in a recent article in the *Journal of the American Medical Association*, had reported some good results in cases of this kind by treating them with carbon dioxide snow. Others had treated them with X-ray and applications of trichloroacetic acid.

Dr. JOHNSON said that Dr. Robinson treated them with 50 per cent. solution of potassium hydrate, the surrounding skin protected with vaseline and the caustic neutralized with vinegar when oozing of serum began.

Dr. WHITEHOUSE said that judging from the photographs which Dr. MacKee showed, it was very similar to a case which he himself had treated and considered as a keratosis, not epithelioma. He had obtained a perfect result by treating with Dr. Sherwell's favorite remedy, acid nitrate of mercury, without curettage, neutralizing with bicarbonate of soda. The result was a perfectly smooth surface, and when last seen five years ago, it was all right. There were evidently several methods of removing this type of epithelial growth successfully.

Dr. FORDYCE said that Dr. MacKee was to be congratulated on the excellent result obtained in this case. The same result might be obtained with more pain and inconvenience to the patient by the use of carbon dioxide snow or the acid nitrate of mercury.

Dr. SHERWELL said that he had cured several cases of ordinary epithelioma of the lip by curettage and the acid nitrate of mercury, and told of one of the cases which could be seen by any one who cared to do so. That case was operated on nearly four years ago.

ACRODERMATITIS CHRONICA ATROPHICANS. Presented by Dr. MacKee for Dr. Fordyce.

The patient was a married woman, 58 years of age, of German birth. She had been under observation for some time in Dr. Wise's service at the Vanderbilt Clinic.

The family history was negative. The disease began 35 or 40 years ago as an erythema of the feet and lower legs and gradually spread to the thighs and buttocks.

When presented to the Society the patient's condition was as follows: There were ulcerations over the malleoli of both feet. The skin of the legs below the knees was very thin, transparent and tight. Over the knees the skin showed the so-called cigarette paper wrinkling. Upon the thighs were found the most inter-

esting lesions. Here was to be seen a most beautiful example of the transition from infiltration to atrophy. Scattered over both thighs were numerous dime-sized, bluish-red nodules. These were elevated above the niveau and were firm but not hard upon palpation. They differed materially from the small, hard, deep-seated fibromata which represented the terminal stages of the disease. In addition to these tumors, there was some atrophy and erythema of the skin. With the exception of pain in the ulcers of the feet, there were no subjective symptoms. The urine was normal; the Wassermann reaction was negative.

HISTOPATHOLOGY (from the Dermatological Laboratory).

Three varieties of tissue changes were seen, though they were not distinctly separable. The first showed beginning inflammation and infiltration; the second, a more advanced infiltration with accompanying atrophic changes; while the third showed the atrophic changes in a farther advanced stage, portions of the infiltrations being replaced by fibrous tissue.

The sections showed a decided thinning of the epithelium, with loss of the papillary bodies; a constant subepithelial band of collagenous tissue, through which the infiltrating cells did not penetrate. The greater portion of the infiltrating cells consisted of lymphocytes of uniform size and plasma cells. The transition from the early infiltrating stages to the terminal atrophic stages was very gradual, each stage merging into the next without definite lines of demarcation. The relative absence of elastic tissue was one of the most constant and striking features in the histological picture.*

CASE FOR DIAGNOSIS. Presented by DR. MACKEE for DR. FORDYCE.

The patient, who was from Dr. Wise's service at the Vanderbilt Clinic, was a married man, 39 years of age. He was born in Russia. He was a mechanic by occupation, his work being mainly the cleaning of electric batteries. He was upon his feet most of the time, often upon a damp floor. He had suffered from rheumatism most of the time for the past three years. There was no history of luetic infection, nor of frost-bite. Three months ago he began to suffer from pain in the right foot. Shortly after this the toes of the right foot became congested—assuming a purplish-red hue. This condition soon spread over the dorsum and sides of the foot.

When presented to the Society, in addition to the congestion, there were several slightly elevated, firm, purplish-red nodules on both the internal and external surfaces of the foot. These ranged in size from a split pea to a ten-cent piece. There was no pain upon pressure. The congestion slowly disappeared when the limb was sufficiently elevated. The right foot appeared to be cooler than its fellow. The Wassermann reaction was negative. The patient was somewhat neurotic.

The speaker said he had considered the possibility of syphilis, claudication, a neurosis and pernio, but had been unable to arrive at a conclusion.

DR. JOHNSON thought that the diagnosis lay between erythromelalgia and a broken down arch. Of course, this was only a tentative diagnosis, but possibly if the arch were attended to, the other symptoms might disappear.

DR. FORDYCE suggested that the case might represent the early stages of thrombo-angitis obliterans.

LEPROSY IMPROVED BY CHAULMOOGRA OIL. Presented by DR. MACKEE for DR. FORDYCE.

The patient, a man, 25 years of age, was from Dr. McMurtry's service at the Vanderbilt Clinic. He was single, a cook by occupation, born in Greece, and had been in this country for four years. The disease began three years ago.

* This case will be reported more in detail in THE JOURNAL.

There were nodules on the forehead, cheeks, ears, arms and legs. These were of a copper color, soft and smooth. There was a marked atrophy of the thenar muscles of both hands, and a pronounced involvement of the ulnar nerves. The Hansen bacillus had been demonstrated. The patient had been taking 15 drops of chaulmoogra oil in milk three times daily, for a period of six months. The larger nodules had become much reduced in size, while some of the smaller ones had disappeared. A photograph, taken before treatment was instituted, was also presented.

Dr. FORDYCE said that the number of cases of leprosy in New York was probably increasing. In the early summer, four different cases had presented themselves at his clinic. Some of these patients gave a history of having developed their lesions in this country. In others, however, they had undoubtedly developed them before reaching our shores.

Dr. HOWARD FOX said that he had seen thirty cases in New York within one year.

ANGIOMA SERPIGINOSUM. Presented by Dr. MacKEE.

This patient was presented through the courtesy of Dr. Wise. It was the case that formed the basis of his article on Hutchinson's infective angioma which appeared in *THE JOURNAL* for October and November, 1913.

There had been no improvement in the eruption. The abdomen was covered with the small, red, annular lesions. The breasts and legs showed many irregular, linear lesions; the arms were the seat of numerous macules. Here and there could be seen the minute red puncta, characteristic of the disease.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON DERMATOLOGY.

Regular Meetings, May 3, and Oct. 7, 1913.

WILLIAM B. TRIMBLE, M.D., *Chairman*.

SCLERODERMA DIFFUSA SYMMETRICA. Presented by Dr. BERK.

Mrs. L. T., 28 years old, had had no children. She had one miscarriage. She was always well until about two years ago, when the finger tips began to get stiff and sore. Since then there was a gradual development of the extensive skin affection, without great impairment of the general health. The lower body, except the toes, was hardly involved. There was no history of lues and no visible stigmata of that disease. The Wassermann test was negative. The vital organs were normal. There was no rise of temperature.

SCLERODERMA CIRCUMSCRIPTUM WITH KELOIDAL BORDERS.

Presented by Dr. BERK.

Mrs. A. L., 36 years old, was married, and the mother of six healthy children. The patient always enjoyed good health. The skin affection began 23 years ago with a hard, elevated, purplish-red, intensively itching papule, which gradually

increased in size, in a centrifugal manner, throwing out irregular spurs and leaving in the centre a completely atrophied scar tissue.

Dr. POLLITZER thought the condition a keloid only.

DERMATITIS FACTITIA. Presented by Dr. BECHET.

Mr. A. V., 17 years old; Italian; had been in the United States since November, 1911. The lesions began 21 months ago on the arms, and soon appeared on the face, trunk and legs. Because of the eruption he was confined to his bed for six months, and had been out of his room only the past two months. He presented a large number of dark brown, sharply defined, perfectly rounded lesions, a considerable proportion of them consisting of scar tissue. A few scars were almost keloidal in character. Other lesions were of a deeper brown, depressed, with a sharp line of demarcation between them and the adjoining healthy skin. All of the lesions seemed to have occurred almost simultaneously and impressed one as the result of the application of some physical irritant.

Dr. McMurtry considered the case one of dermatitis factitia, and had observed similar lesions in Germany, among malingersers.

LUPUS ERYTHEMATOSUS DISSEMINATUS. Presented by Dr. BECHET.

Mrs. A. R., 57 years old. The eruption first began on the hands six weeks ago and soon appeared on the arms and face. The condition had been increasing rapidly. She presented a large number of red, scaly, infiltrated, sharply margined plaques, covering a large part of the face and arms. Some of the lesions showed marked atrophy. The Wassermann reaction was negative.

PSORIASIS OF PALMS. Presented by Dr. BECHET.

Mr. J. E., 21 years old. The eruption began on the palms of both hands ten years ago. After remaining confined to the palms only, for five years, the disease invaded other parts of the body. He presented punctate psoriatic lesions, most numerous on the fingers and palmar surfaces of the hands. The eruption, he claimed, itched a great deal.

CASE FOR DIAGNOSIS. Presented by Dr. TRIMBLE.

The patient was a man, 38 years of age. His occupation was file maker. He was born in the United States, and was single. The case had been under observation for three weeks at the University and Bellevue Clinic. When he was first seen, he presented a small ulcer about the size of the little finger nail at the left commissure of the mouth. It had an uneven yellow base with a fairly clean cut border, very much as it was at the time of presentation. The duration was seven months, and there were no subjective symptoms of consequence. His testicles were also swollen about twice the normal size and tender on pressure.

He gave a history of having had a sore on his penis sixteen years ago, which was followed by falling hair, but no other secondaries; he however took mercury "off and on" for two years, following this. Further examination revealed the fact that he had a cavity in the upper lobe of the right lung and consolidation at the left apex. Tubercle bacilli had been demonstrated in the sputum, and the Wassermann reaction was positive. The urine was negative. His treatment for the last three weeks had been mercury and iodide of potash, but the latter drug had to be discontinued on account of marked iodism. Prior to his coming to the clinic he had been treated in the genito-urinary department of another institution. The clinical diagnosis made was syphilis. A Wassermann was performed and found to be negative. A second Wassermann showed the same result. Regardless of the negative Wassermann, the patient was treated with 15

injections of mercury salicylate but no beneficial result was obtained. He was also given two intravenous injections of neosalvarsan, without result.

DR. BERK said that the bluish-red, soft infiltration of the ragged, undermined edges surrounding the uneven ulcer, the bottom of which showed a caseous appearance, pointed to a tuberculous origin.

DR. POLLITZER said that the ulcer seemed to him unmistakably tuberculous.

CUTANEOUS TUBERCULOSIS. Presented by DR. WISE.

The patient was 25 years old; single; a miner by occupation, and in perfect physical condition. The lesion began as a small, reddish-purple papule eight years ago, and had had no treatment of any kind until seen recently. It consisted of a patch of purplish skin, about the size of a man's palm, irregularly circular in shape, with scalloped and serpiginous borders, partly crusted at the periphery; it was situated on the posterior aspect of the left thigh, just below the cruronatal fold. The greater portion of the interior of the patch showed scarring, marked evidence of spontaneous involution.

The Wassermann test taken a few days ago was negative, the von Pirquet test was positive.

GRANULOMA PYOGENICUM. Presented by DR. POLLITZER.

The patient was a woman. On her left cheek there was a large, pedunculated, lobulated tumor, vivid red and covered with a serous discharge.

DR. POLLITZER gave a brief historical survey, pointing out that only staphylococci had ever been isolated in these cases. The treatment consisted as a rule of excision and cauterization.

DR. GOLDENBERG stated that some authors had found protozoa similar to Leishman bodies and that traumatism played some rôle in the ætiology. He had seen three cases within the last few years, confirmed by microscopical examination, one on the toe, one on the finger, one on the face, which differed from the case presented in their size, being much smaller and having a distinct pedicle.

CASE FOR DIAGNOSIS. Presented by DR. CLARK.

Miss R. M., 43 years old. The disease began four months ago, as a white patch on the back. A little later, other white patches appeared and gradually grew to the size presented. The lesions had never been itchy. There was a little pain in the lesions on the back. The lesions were white in color, showed a distinct atrophy and little or no infiltration. In spots there seemed to be a flat, silvery scale. Around one or two of the lesions there seemed to be a faint red area with a few dilated vessels.

DR. GOLDENBERG had observed the patient for a few weeks. From the beginning, the case was suggestive of a lichen planus atrophicus or morphœicus and the longer he had observed the case the more he became convinced that if morphœa guttata was to be differentiated from lichen atrophicus, this case belonged to the latter group. It differed from white spot disease in having grouped papules, such as one saw in this patient, especially on the neck, where six papules were distinctly grouped, others in linear arrangement; and by the fact that the smaller and larger lesions had characteristic, comedo-like, horny plugs which one did not find in morphœa.

A few years ago he had seen a similar case where Dr. Fordyce was kind enough to do a biopsy which confirmed the diagnosis. This case had been described by Dr. Fordyce in his article on lichen a few years ago.

An unsuccessful attempt had been made to induce the patient presented at the meeting to consent to a biopsy.

URTICARIA PIGMENTOSA. Presented by DR. BERK.

O. R., a female, well nourished, was the first child of Mrs. R., born in the United States 4 months ago. The delivery was normal. The infant was breast-fed the first 3 months, then also the bottle was given. The bowels always were regular. At the age of 6 weeks the infant began to get wheals and papules. These came and disappeared. Pigmentations were first noticed by the mother 2 months ago.

All over the body and extremities were to be seen irregularly distributed, striped, linear and network-like pigmentations on apparently normal smooth skin. The face and mucous membranes were free. Very pronounced factitious urticaria could be elicited. The pigmentations were bluish dark.

DR. BERK stated that the disease at first resembled urticaria pigmentosa, although he realized that from its appearance when presented this diagnosis might be questioned. He still adhered to the first diagnosis.

DR. ROBINSON regarded the case as a nævus.

DR. POLLITZER stated that he could not make a diagnosis but ruled out urticaria pigmentosa because this disease would not cause such depth of pigmentation within four months and because the extremities rather than the trunk were involved. He favored the diagnosis of pigmentary nævus.

ERYTHEMA NODOSUM. Presented by DRs. MACKEE AND WISE.

A. M., 12 years old; born in United States, was from Dr. Fordyce's Clinic. The disease appeared two weeks ago on the anterior portion of both legs. The patient had rheumatic inflammation of the left shoulder joint during the past week.

DR. GOLDENBERG suggested the diagnosis of bromoderma tuberosum.

PITYRIASIS RUBRA PILARIS (DÉVÈRGIE). Presented by DR. BERK.

Mr. M. K., 28 years old; single; a baker by trade, was always well and had a clear skin until October, 1912, when the skin trouble for which he was shown began to develop. There were two kinds of lesions to be seen, partly isolated and partly confluent ones. The first appeared as red, dry, conical, hard, glistening, prominent papules, plugging the follicles, covered by a horny, spiny top, with sometimes a broken hair in the centre and a bright-red, shiny, surrounding infiltration. The other represented smaller or larger, extensively coalescing patches of either dry red surfaces or covered with thick adherent, flaky psoriasis-like scales, particularly on the elbows, knees, back of neck, and lower limbs in general. The nail-beds were much thickened. The scalp and hair were not involved. The general condition was good, there was no itching and the urine was normal.

ERYTHEMA IRIS. Presented by DR. PAROUNAGIAN.

Mrs. G., 34 years old; Russian.

Family history; the father died of pneumonia, the mother was living and in good health. She had four sisters and four brothers who were all well.

About a year ago she developed lesions similar to the ones for which she was presented. The lesions were erythematous, concentric rings; some of the rings consisted of bullæ and vesicles. Some of the lesions were violaceous in color, others scaly, resembling pityriasis rosea lesions. The location of the lesions was on the face, neck, upper portion of the chest and on the thighs.

The condition seen on presentation started about the middle of February, on the upper portion of the chest, as a single patch; a week later, another patch developed, adjoining same. The borders were elevated and reddish in color; in the centre of the lesions at least two other rings could be clearly seen. These

two lesions gradually spreading, coalesced, forming a reniform patch. Within a few days a number of other lesions developed on the side of the neck, on both shoulders and on the chest. Some of the lesions were oval and scaly and somewhat itchy. The patient had a persistent cough.

UNUSUAL TYPE OF LUPUS ERYTHEMATOSUS. Presented by Dr. HEIMANN.

V. W., 58 years old. Five years ago the patient had sub-acute eczema, in the inguinal region and arms. A year ago, the illness for which the case was shown began, with an itching eruption of the scalp behind the ears. This tended to improve spontaneously and reappear. Biopsy performed at that time proved the lesion to be lupus erythematosus. During the past three months the lesions had extended.

SYPHILIS WITH UNUSUAL FACIAL MANIFESTATION. Presented by Dr. HEIMANN.

Mrs. W. E., a West Indian, had been married six years. She was pregnant in the first year and miscarried at the third month. She had never been pregnant since. She entered Cornell Dispensary Sept. 23, 1912. The Wassermann test was strongly positive. At that time the scalp, neck, face, back, palms and soles were covered by a rash. That on the face itched and scaled, suggesting seborrhœal eczema. It seemed to be made up of confluent lesions with gyrate, elevated margins, distinctly raised above the surface of the normal skin. The color was reddish-blue. (The patient stated that she had previously been treated with an irritating salve, evidently containing chrysarobin.) The lesions elsewhere on the body consisted of single or grouped papules, some of which were reniform and many of which were scaly, particularly those on the palms and soles. All the lesions had improved with mercury injections and many had disappeared, those on the face and palms being most persistent. Her Wassermann reaction six weeks ago was still positive.

Dr. Lusk regarded the case as one of lupus erythematosus.

Dr. Pollitzer would even include the palmar lesions in this diagnosis.

Dr. Trimble agreed with Dr. Pollitzer.

LUPUS ERYTHEMATOSUS TREATED WITH THE KROMAYER LIGHT. Presented by Dr. CLARK.

The patient had had a disseminated lupus erythematosus for eight years. He had several areas treated with carbonic snow, with considerable scarring where applications were made. The patient had lately had several Kromayer light treatments, varying from 25 to 35 minutes in duration and in every instance, excepting patches that were underexposed, the lesions disappeared without scarring.

LEPROSY. Presented by Dr. POLLITZER.

The patient was 31 years old, a native of Barbados. The disease was of the pure nerve type. The ulnar nerves were thickened. He had large macular scaling areas on the extremities, complete sensory paralysis of both hands, atrophy interossei of the left hand and beginning *main en griffe*. The disease was of about eighteen months' duration. The patient admitted having had a hard chancre. The Wassermann test was four plus.

CASE FOR DIAGNOSIS. Presented by DR. BECHIET.

Mr. H. P., 55 years old. About 14 months ago he first noticed a small, roundish lesion on the glans penis; since that time it had slowly increased in size. When first seen in June, 1913, he presented for examination a raised, papillomatous lesion, perfectly round, about one quarter of an inch in diameter and covered with a thick, whitish exudate. He said the lesion was exquisitely sensitive to the touch. The Wassermann reaction was negative. In spite of a strong suspicion of malignancy, the case was presented for diagnosis.

Dr. LAPOWSKI said that the case was certainly one of epithelioma.

Dr. POLLITZER said that the case was probably epithelioma. He recommended a biopsy and then if the case proved to be epithelioma, a wide excision, perhaps amputation of the penis.

LICHEN PLANUS UNIVERSALIS. Presented by DR. LAPOWSKI.

Mr. T., 28 years old. The disease appeared three months ago. The lesions which appeared on this patient had all the clinical characteristics of syphilitic papules, and in the absence of all subjective symptoms of lichen, the diagnosis was in doubt until new lesions appeared, during the presence of the old ones, in the course of three days' observation. The Wassermann reaction was negative. He was treated with injections of Fowler's solution.

Dr. OULMANN said that he was unable to note lesions like lichen planus in this case.

Dr. POLLITZER said that none of the lesions suggested lichen planus. All the lesions were slightly scaling macules one-half to one centimetre in diameter; an appearance which was not compatible with a previous lichen planus. The condition may belong to the group of parapsoriasis.

Dr. WISE said that a possibility of the case being a drug eruption was to be considered.

Dr. LAPOWSKI, closing the discussion, said that it was only natural that no characteristic lesions of lichen planus should have been visible, as their character had been changed by treatment. It was the new lesions only which were characteristic and in this case there had been raised papules, sharply outlined, quadrangular-like lesions of lichen planus and not like those of parapsoriasis.

LUPUS ERYTHEMATOSUS OF THE LIP. Presented by DR. LAPOWSKI.

The localizations occupied by lupus erythematosus patches when last presented to the Section, Dec. 5, 1911, were perfectly clean. Macroscopically, no scars were visible, and no pigmentations, except on the dermo-mucous portion of the lower lip, where pin-head scars, slightly pigmented, could be seen. On the sites of previous tubercles, slightly pigmented scars were present. The patient was presented to demonstrate the disappearance, without any macroscopical changes of the skin, of the former patches, accepted as lupus erythematosus. The patient had been treated anti-specifically with calomel and rubbings, for a period of several years. The last application of mercury was $1\frac{1}{2}$ years ago.

LEPRA, TUBERCULO-ULCERATIVE FORM. Presented by DR. LAPOWSKI.

The patient was a woman, born in Riga, Russia—a region of endemic leprosy—near the Baltic Sea. She had been under the care of many physicians. According to her statement, the diagnosis of lepra was made by a finding of the bacillus of leprosy. There was no history of syphilitic infection. The first appearance of the leprous lesions was 10 years ago. She came to the dispensary May 20, 1913, with a "four plus" Wassermann reaction. The leprous nodules were present on the ears, face and upper extremities. On the last localization, the lesions, both

as to arrangement and as to color, suggested very much those of syphilis. Leprous gummata were present on the right crus, which healed under potassium iodide and injections of calomel. The tubercles on the hands, the upper extremities and ear were markedly diminished and in some places entirely absorbed, under similar medication.

DR. OULMANN said that this woman was under his care eight years ago, having been referred to him by Dr. Goldenberg for X-ray treatment, under which the lesions had improved. Her mother died of leprosy and she lived with sisters who were healthy. When living in the country, where X-ray treatment was not available, the tumors of the face had enlarged. She had had a great variety of treatment. She had had tumors of the larynx and an ulcer on the epiglottis and had received salvarsan injections at the Post Graduate Hospital from Dr. Pollitzer, but without effect on her disease.

DR. HOWARD FOX said that it would be interesting to determine whether the strong positive Wassermann reaction in this case of leprosy could be influenced by the use of calomel. Dr. Lapowski said that Hansen's bacillus was said to have been found in this patient. He had seen other cases which showed the same very rapid clinical improvement after the injections of calomel. He had seen no records of cases of leprosy with positive Wassermann reactions, which had been treated regularly with calomel.

DERMATITIS HERPETIFORMIS. Presented by DR. WISE.

S. G., a woman, 56 years old, was born in Russia. The disease appeared about one year ago. The trunk and legs showed diffuse pigmented plaques. On the neck, chest and back were large eczematous patches. Scattered irregularly over the trunk, legs and arms were vesicular and papular lesions, grouped in circles and ovals. Itching was very intense.

She had been receiving injections at the Good Samaritan Clinic, where she was under Dr. Lapowski's care. She was being treated by the speaker with local applications and arsenic, internally.

SCLERODERMA. Presented by DR. GILMOUR.

MR. J. N., 58 years old, white, born in Ireland; married. The family history was negative, as was also the personal history. Present History. The patient was in perfect health before and on Nov. 4, 1912. On that evening, while watching the election returns, the "hands and feet felt on fire." The patient took his hands from his pockets, removed his gloves, and noticed his hands were red and spotted with white patches. Two or three days later, the hands had regained their usual appearance and remained so for about two or three weeks. The patient then noticed that the index and middle fingers of the right hand and the index, middle and ring fingers of the left hand were gradually becoming affected with a stinging pain. This pain lasted two or three weeks, during which time these fingers were gradually becoming a black color. Their discoloration increased for two or three months, with a concomitant hardening and thickening of the skin. This skin loosened somewhat from the fingers and made a cast surrounding them. It resembled celluloid. The edge of this blackened and hardened skin kept gradually sealing for the next month. The fingers were apparently well and their normal function was preserved. The only abnormality complained of by the patient was a tenderness when the fingers were struck. This apparently normal condition, after the fingers cleared up, lasted about two weeks. The hands and feet gradually developed an oedematous swelling during the next two months, after which a redness slowly appeared on the posterior aspect of the joints of the hands and feet. The patient had lost 29 pounds during the last 10 months. His appetite had gradually failed so that there was little desire for food.

The patient had been hoarse for the past 5 months, and for the last 3 months he had had a sharp pain, of short duration, whenever he swallowed solid food, liquid food or even his saliva. This condition had gradually become worse.

Physical Examination. The larynx showed the cords on their outer edge to be red and thickened, giving the appearance of a band. The cutaneous involvement was as follows: The skin of the face was thickened and had a mask-like appearance. It was smooth and shiny, with an obliteration of the wrinkles. This was especially well shown at the location of the outer ends of the crow's feet, about the eyes.

The entire circumference of the chest gave a slight intimation of thickening, but the thickening was distinctly seen on the front of the chest, above a line connecting the axillary folds. This area was smooth, thickened, and had a pinkish color. Small dilated capillaries were scattered over this area. The neck was slightly involved, but with little apparent thickening and with no change of color.

The parts most involved were the limbs, especially the forearms and hands; these were markedly atrophic, the outer parts to a lesser degree. They were symmetrically involved. The tips of the elbows showed a slight redness and thickening. The entire backs of the hands were brawny and thickened. There was an especially bright red streak, one-half inch broad, that ran up the radiodorsal surfaces of the forearms for five inches, and an even more acutely red streak of the same width, running up the posterior ulnar sides for two inches.

The fingers were the most involved, and were quite incapacitated. They were smooth, brawny, thickened, contracted and held one quarter closed, giving the appearance of a claw. They were so stiffened that the patient could move them only at the metacarpophalangeal joints and there but slightly. The thumbs were held quite straight, with a very marked limitation of motion. The patient dressed with great difficulty. Passively, the fingers could be a little extended and this with a crackling sensation. The patient, on active motion of the neck, at times noticed the same crackling sensation. The fingers had been bent for the past four months. There was a slight reddish-pink color over the dorsal surface of all the finger joints. The knees, over the extensor surface, showed a slight redness but no marked thickening. The skin of both feet was smooth and thick, the same condition extending two inches above the ankle joint. The color was a bluish red. There was but slight limitation of motion in the joints of the feet and ankles, but enough to make the patient walk lame.

Atrophic changes were well marked in the hands, feet and to a less extent, in the face. The skin was dry, smooth, thinned and stretched over the underlying subcutaneous tissue.

Examination of the urine proved negative. The Wassermann reaction also was negative.

The patient had been under observation since July 17, 1913. He had continuously taken thyroid extract (Protonuclein of Beebe, gr. v.) three times a day, after meals. There had been some softening of the skin under this treatment.

LEPROSY, MIXED TYPE. Presented by Drs. MacKEE and WISE.

Mrs. E. C., 47 years old, married, born in Hanover, Germany. She had never been in any foreign country, aside from her birthplace. She had two children, aged 19 and 14 respectively, both healthy. The husband was born in Bremen and was healthy. The previous history was negative.

The disease began about two and a half years ago, in the form of large subcutaneous nodules on the legs. Soon after, papules developed on the legs and arms. Areas of anæsthesia developed on both upper and lower extremities. The present condition showed areas of pigmentation, areas of anæsthesia, ulnar nerve enlargement, nodules on the extremities, papules and macules, thickening of the

ears and eyebrows and œdema of face and eyelids. There was considerable improvement under chaulmoogra oil, M xx, t. i. d., p. c.

Hansen's bacillus had been found in the lesions. The patient was from Dr. Fordyce's clinic.

RHINOPHYMA. Presented by Dr. BECHET.

Mr. J. M. The patient first noticed the disease seven or eight years ago. The growth had been steadily increasing ever since, but had remained stationary for the past year. The mass involved the lower half of the nose, and represented an extreme degree of rhinophyma.

PARAPSORIASIS GUTTATA. Presented by Dr. BECHET.

Miss B. W. The eruption appeared about three years ago, first on the arms and legs, then, within a short interval, on the trunk. Since then, she had never been free. When she first came under observation in June, 1913, she had a large number of maculo-papular lesions on the arms, legs and body. She had always complained of much pruritus, yet, in the three months she had been under observation, there had been no scratch marks, excoriated lesions, or other objective signs of pruritus. Many of the lesions so markedly simulated lues, that a Wassermann was at once made and found negative. In spite of this, she was put under very active specific treatment for three months, at the end of which time the eruption remained unchanged. Energetic local treatment also proved barren of results.

Dr. HEIMANN agreed with the diagnosis. The resemblance of some of the lesions to syphilis, of others to psoriasis, still others to lichen planus was quite characteristic.

Dr. LAPOWSKI said that this was a case of lichen planus, and that he had seen many patients showing this variety of lesions.

Dr. HOWARD FOX thought that several of the lesions resembled closely those of lichen planus. There was also, he thought, unquestionable evidence of scratching. He urged that a biopsy be made.

Dr. BECHET, closing the discussion, said that the lesions had looked like those of syphilis, but were not affected by energetic treatment. Two Wassermann tests, previous to any specific treatment, were negative. The statement of the patient that the itching was severe must be accepted with caution, as there were no scratch marks. The diagnosis must be made by exclusion. None of the lesions resembled lichen planus, in his opinion.

ICHTHYOSIS HYSTRIX. Presented by Dr. TRIMBLE.

Miss E. L., 12 years old. Born in the United States. The disease began at five years of age. The location was general. She had been in the hospital almost six years. The disease was worse in Winter; in Summer, with the aid of warm alkaline baths, the thick, dark, horny layer of skin could be removed; the erythematous areas did not change. The disease had never improved under treatment. The Wassermann reaction was negative. The urine was normal. The white and red blood cells were normal.

Dr. HOWARD FOX referred to the fact that this interesting case had been presented a good many times before dermatological meetings in New York. He thought that the diagnosis of congenital ichthyosiform erythrodermia had been generally agreed upon. The case had originally been presented as one of *acanthosis nigricans*, a diagnosis which was entirely ruled out by the fact that many of the lesions had been more or less completely removed by the vigorous use of

green soap. The redness and location of the eruption spoke against the diagnosis of an ordinary ichthyosis.

DR. LAPOWSKI said that this was a case of ichthyosis of the verrucous type.

DR. POLLITZER said that in his opinion the diagnosis lay between ichthyiform erythema and pityriasis rubra pilaris; the thickening, the parakeratosis, the discoloration and the chronicity suggested the latter disease; on the other hand, there were no especially marked lesions of the follicles and the tip of the nose was free, while other parts of the face were involved.

DERMATITIS EXFOLIATIVA FOLLOWING PSORIASIS. Presented by
DR. TRIMBLE.

Mr. F. O., 23 years old. The patient claimed to have had psoriasis two and a half years ago, which was cured in six weeks. The present attack began three and a half months ago, appearing as scaly patches upon the knees and elbows and gradually becoming general. On entrance to the hospital, the body, limbs, face and scalp were covered with thick, scaly psoriatic patches. Ungt. lanolin comp. was applied to the whole body, so that the thick scales were softened and removed. The urine and blood were normal.

DR. WALLHAUSER said that this case belonged to the type of generalized dermatitis in which the prognosis was good. It was distinct from the Hebra type in every way.

DR. POLLITZER said that this was clinically a case of dermatitis exfoliativa of which there were several types. This case, while not distinguishable clinically at the moment from the Hebra type, which was usually fatal, was only a generalized desquamative dermatitis, secondary to psoriasis. The prognosis was good.

DR. LAPOWSKI said that in these secondary cases traces of the original disease, in this case psoriasis, could be seen through the eruption, while in the true Hebra type, this did not occur.

LICHEN PLANUS OF THE BREAST. Presented by DR. LAPOWSKI.

Mrs. P., 45 years old. The disease appeared five years ago. Around the nipple of the left breast, a dollar-sized patch with lichen papules and pin-head scars was seen. The lesions never disappeared completely, some pin-head sized, shiny papules, with slight itching, always remaining. One month ago, on the left side, lesions of lichen planus appeared with itching.

GENERALIZED LICHEN PLANUS. Presented by DR. LAPOWSKI.

Mrs. H., 46 years old. The disease appeared three months ago. On the upper and lower extremities, abdomen and neck, was an eruption of lichen planus in patches and in disseminated lesions. There was very slight itching. On the lower lip, a whitish pellicle was seen.

PITYRIASIS RUBRA PILARIS. Presented by DR. LAPOWSKI.

Mr. J., 40 years old. Occupation, bricklayer. The disease appeared eight years ago, and was universal. Family history. One sister and one brother died of "Jung" diseases. The patient was married eighteen years. There was no history of tuberculosis either in the patient or in his three living children. The disease started on the flexor surfaces of the arms, with severe itching, and red spots appeared on the breast and elbows, gradually spreading over the whole body, and since that time the redness and itching were always present. Two years ago he began to lose his hair. The general health was unimpaired.

He came to the dispensary October, 1912, with erythematous, slightly infiltrated

patches, consisting of papules, some conical, with white, very adherent scales, and some flat papules arranged in rings, localized on the breast, abdomen and flexor surfaces of the arms. The rest of the skin was red, dry, with minute scales. The nails showed between the bed and the body of the nail, keratosis, and were raised and striated. The palms and soles were hard, cracked, infiltrated, with fine scales. The face was red, drawn, slightly scaly. There was ectropion of the left eye. The lower lip showed whitish lines and rings.

He was treated with subcutaneous injections and lubricants, resulting in a very pronounced improvement, showing itself in pliability and softness in those parts of the skin which before treatment were hard, cracked and infiltrated.

DR. WALLHAUSER said he was inclined to regard this as a case of pityriasis rubra of Hebra, as it lacked the papular condition seen in pityriasis rubra pilaris; furthermore, the atrophic features of the Hebra type, ectropion, etc., were present in this case to a marked degree.

DR. HOWARD FOX said that he could see no evidence of pityriasis rubra pilaris and thought Dr. Wallhauser's suggestion of pityriasis rubra of Hebra should be seriously considered.

DR. POLLITZER said that the patient presented some symptoms of pityriasis rubra pilaris notably on the forearms, but the atrophic patch on the trunk was not a lesion of that disease and the skin showed no development of horny plugs. The atrophy and the ectropion suggested the pityriasis rubra of Hebra, while the long duration, eight years, was not common in that disease. He would make no positive diagnosis without opportunity of further observation.

CHANCER OF THE BREAST. Presented by DR. POLLITZER.

Woman, 33 years old. She noticed a sore on the left lower quadrant of the left nipple, three weeks ago. The appearance was characteristic of chancre; the spirochætæ were present. The husband had an extragenital chancre, on the tip of the index finger, six months ago, and was then under treatment. The patient received an intravenous injection of salvarsan, on the day of presentation.

CASE FOR DIAGNOSIS. Presented by DR. LAPOWSKI.

Mr. G., 22 years old. He gave a history of eye trouble in early childhood, probably scrofulosis. There was no relevant family history. The general condition was normal. The disease appeared more than fifteen years ago, on both palms, both soles and both elbows, and had continued since then improving in Winter and growing worse in Summer. The soles of the feet were red, dry, keratotic, with rhagades. A sharp, red demarcation line separated the dorsal part of the foot from the soles. There were no separate lesions, only the entire sole was red and scaly. The palms of both hands were red and slightly scaly, the lines exaggerated, the redness stretching over the dorsal aspect of the fingers and hands. Both the palmar and dorsal affected regions were separated by a sharply defined, red border, with fine scales, from the healthy portion. The redness advanced down to the flexure of the wrist and to the dorsal portion of the palms; the elbows showed an irregular patch, red, scaly and papular. Itching was entirely absent.

GUMMA OF THE THIGH. Presented by DR. LAPOWSKI.

Mr. N. was previously presented to the Section, March 4th, 1913, with the diagnosis of gummata luetica. Since presentation, four calomel injections had been administered. The last injection of calomel was given August 22nd, 1913, and one intravenous injection of neosalvarsan, 0.6, had been given. The Wassermann reaction was negative (Department of Health) Aug. 20, 1913. The purpuric

follicular lesions which had been present up to May, 1913, could not be seen any more. The infiltration surrounding the lesions was greatly diminished, but the progress of healing was not satisfactory.

DR. HOWARD FOX said that this case was one of a class where several possibilities, including syphilis, tuberculosis and blastomycosis were suggested. It was a case in which it seemed difficult or impossible to make a positive diagnosis from clinical appearances alone. He thought that pathological investigation should be made without further waste of time in order to settle the diagnosis.

DR. LAPOWSKI, closing the discussion, said that as this patient had had many injections of calomel and as he had now twice given a negative Wassermann reaction, the diagnosis of tuberculosis of the skin could be entertained.

MANHATTAN DERMATOLOGICAL SOCIETY.

Regular Meeting, November, 1913.

L. OULMANN, M.D., *Chairman.*

EPITHELIOMA FOLLOWING LUPUS VULGARIS. Presented by Dr. MACKEE.

The patient was a male adult who was presented through the courtesy of Dr. Holding. He had had a lupus vulgaris for 23 years. The entire face was involved. It was interesting to note that the patient's brother also had lupus vulgaris of the face. The affection which the patient presented was of the flat, atrophic, apple-jelly nodular variety. Several years ago he had been repeatedly exposed to the X-ray without much effect upon the lupus. Three years ago, a squamous-celled epithelioma developed in the scar tissue on the nose. The tumor and the entire nose had been removed surgically two or three months ago. Within the past few months, several intensive X-ray treatments had been administered to the face. When presented, there was no sign of malignancy, but apple-jelly nodules could be detected scattered throughout the diseased areas. In addition to the X-ray, which was administered years ago, the skin over the nose had been repeatedly frozen with ethyl chloride. The interesting feature of the case was whether the epithelioma was secondary to the lupus, the X-ray or the ethyl chloride. It was the speaker's opinion that the X-ray was at least a contributory ætiological factor. In addition, he did not believe that the X-ray was very efficacious in this particular variety of lupus vulgaris.

DERMATITIS HERPETIFORMIS. Presented by Dr. OCHS.

The patient, Helen J., aged 3 years, had had four recurrent attacks of a cutaneous eruption, always confined to the outer side of the sole of the right foot and extending to the big toe. The first attack occurred over a year previously, the second about three months thereafter and the third about three months after the second and the last, one week previous to being shown. Between these attacks she had been practically free. Each attack started with an itch, and quickly thereafter a group of hard, shiny, tense vesicles appeared, quickly followed by other groups. These soon broke down and formed into a dirty brownish crust. At the time of presentation, crusting of the sole was seen and a new area of vesicles at the back of the sole close to the heel was visible. On account of the pruritus, the vesiculation and the recurrence, the case was presented as one of dermatitis herpetiformis.

Dr. MacKEE said that he would not regard the case as one of dermatitis herpetiformis. He thought that a diagnosis of vesicular eczema or the unilateral dermatitis repens of Crocker should receive consideration.

Dr. GEORGE HENRY Fox said there was a bullous form of dermatitis herpetiformis, but that the term did not seem applicable in this case. He showed a photograph of a case very similar to the one presented, except that the sole was perfectly free. The speaker said such an eruption often occurred on the extremities in children. As to diagnosis, Dr. Fox said he would call it an acute recurrent pemphigus or pemphigoid eruption.

Dr. WISE considered the case to be one of chronic recurrent eczema.

Dr. PAROUNAGIAN was in favor of the diagnosis of pompholyx on account of its location and character of the lesions.

Dr. OULMANN said he would also call the lesion pompholyx, as the skin over these bullæ was hard, while in pemphigus they would not contain such clear fluid.

Dr. OCHS said that for a pemphigus, he thought the vesicles were entirely too thin walled, as in such an eruption they usually appeared to be thicker. The speaker said he had seen this child four times with a similar eruption and each was identical to the other in its action and in locality. He said he did not see why dermatitis herpetiformis should be excluded in this case; that the child's skin became intensely itchy and that after the itching, these bullæ would arise, and within about twenty-four to forty-eight hours break down; crusting would take place, followed by healing, and soon thereafter another outbreak similar to the first would occur.

DERMATITIS HERPETIFORMIS? Presented by Dr. OCHS.

The patient was a small child whom Dr. Ochs presented in conjunction with the previous case. The child was 2 years of age and had had 3 attacks of the eruption, the first one being at the age of 9 months. The lesions were grouped and located on the face, arms and the small of the back. They were intensely itchy and showed the typical vesicles, scratch marks and crusts. This was presented as an eczema which probably would later develop into dermatitis herpetiformis.

Dr. Pisko said that in this case he agreed with the diagnosis of dermatitis herpetiformis, although he thought he saw an eczematous condition, especially around the ears.

Dr. BECHET and Dr. OULMANN thought this case was one of vesicular eczema.

DERMATITIS EXFOLIATIVA. Presented by Dr. OULMANN.

The patient was a female, 63 years of age. For about 25 years she had had what she called "raw" palms and soles. About 5 years previous to her presentation her entire skin started to get red and to peel off in large plaques. In the course of her skin disease she had an attack of neuritis, and her fingers after this time were all rigidly retracted. From time to time the patient would get exacerbations. The speaker said he would call this a chronic case, and that the patient did not feel the cold greatly and had no sweats. He believed the condition would continue to be a long standing one. He said Dr. George Henry Fox had seen the patient a few years previously at the Skin and Cancer Hospital, and at that time he had also made a diagnosis of dermatitis exfoliativa.

Dr. MacKEE said that he had treated a very severe case of dermatitis exfoliativa with the X-ray. The lesions and the distressing symptoms rapidly disappeared. Unfortunately, however, the treatment had no lasting effect upon the disease, so that new lesions were developing constantly, even on areas to which the ray had been applied.

Dr. McMENTY said he thought it was a dermatitis exfoliativa and that it

would be very interesting to ascertain if it had ever been treated by a drug and possibly overstimulated. He said that the lesions might have been caused by the use of heavy doses of chrysarobin.

Dr. OULMANN said that the condition of her palms and soles, which had been affected for 25 years, would certainly not indicate a plain seborrhœic eczema. The speaker had treated the lesions which extended almost over the entire body, for a number of months with Lassar's paste.

CASE FOR DIAGNOSIS: DERMAL PIGMENTATIONS OF UNKNOWN ORIGIN. Presented by Dr. GOTTHEIL.

This patient was a trained nurse, and her history, about which she was very positive, was therefore more reliable than that of an ordinary patient. She presented on the neck and shoulders some score of rounded or oval, very slightly depressed, permanent dark-brown areas, from a quarter to half an inch each in size. These had been gradually coming on for the past 6 years; each one had developed very slowly; no single one had ever disappeared, and several, which she pointed out, had come within the last few months. There had never been any itching or other subjective symptoms; the patient was very sure, as many of the spots on the front of the neck were accessible to her close observation, that at no time from the beginning of each spot had any of them presented any other appearance, and especially no one had ever been papular; each commenced as a minute pigmented spot and grew very slowly in size. She asked relief for the disfigurement only.

The atrophy, if any was present, was extremely slight; and the stains resembled mostly those left by an urticaria pigmentosa. They might supposedly also have been the remains of an old lichen planus. But the entire absence of papules or wheals or itching at any time, the permanence of the lesions for many years and slow increase in size, would seem to render neither diagnosis probable. The speaker was inclined to regard the case as one of progressive pigmentation and atrophy in spots.

Dr. Pisko said that the lesions of the wrist seemed to him to be quite elevated, and that the condition impressed him as being characteristic of lichen planus, especially so on the limbs.

Dr. BLEIMAN said that after closely examining the lesions on the anterior surface of the forearm, the case looked to him like a lichen planus.

Dr. WISE thought the lesions might be fibromata, such as were seen in von Recklinghausen's disease, although the rapidity with which the lesions appeared spoke against both von Recklinghausen's disease as well as atrophica cutis maculosa.

TUBERCULOSIS OF THE TONGUE. Presented by Drs. MacKEE and WISE.

The patient was a man of 50, who was under observation in Dr. McMurtry's service at Dr. Fordyce's clinic. There was a dime-sized, somewhat indurated ulcer on the tip of the tongue. The man suffered from pulmonary tuberculosis and a tuberculous laryngitis. Tubercle bacilli had been found in deep scrapings from the lesion under proper aseptic precautions to prevent contamination from the throat or lungs.

MOTTLED ALOPECIA OF THE BACK OF THE HEAD. Presented by Drs. MacKEE and WISE.

The patient, a young man from Dr. Fordyce's clinic, gave a history of luetic infection and presented lesions on the mucous surface of the prepuce which looked like moist papules of syphilis. There was a mottled, moth-eaten alopecia of the back of the neck, below the occipital protuberance. The alopecia was not

marked and was noticeable mostly with a side light. The exhibitors had considered the possibility of traumatism as, for instance, a pair of dull barber's hair clippers, but they were more impressed with the possibility of syphilis being the ætiological factor.

STAPHYLOCOCCIC SYCOSIS. Presented by Dr. WEISS.

The patient was a male adult, single, 27 years of age. He had the eruption he complained of for 4 years. It started on the face. He was given white precipitate ointment with some relief. A relapse took place, and the affection spread also over the hairy parts of his body, occupying the axillæ, the thighs and the pubes. The patient had never been entirely free from it. At the time of presentation he showed a folliculitis in an acute and subacute stage, with scaling on the face. There was also a folliculitis present on the eyelashes. The case was presented because of its general extension over the hairy parts and on account of the chronicity. As to treatment, the application of 5 per cent. chrysarobin ointment was suggested, and later reports showed great improvement under this treatment.

Dr. McMurtry said it would be interesting to find out if any cultures had ever been made from the scrapings of the skin. He stated that the condition looked to him like an epidermophyton infection.

LEPRA TUBEROSA, ANÆSTHETICA AND MUTILANS. Presented by Dr. GOTTHEIL.

The patient, a female, aged 45, had had leprosy for many years, and for the past 6 had been under Dr. Oulmann's care. It was an advanced case of anæsthetic and nodular leprosy, in which ulcerative and atrophic changes in the fingers had already begun. The point of especial interest was the involvement of the larynx; the patient had been hoarse for many months, speaking in whispers. Laryngoscopic examination showed thickening and nodulation of the vocal cords, due to the presence of lepromatous infiltrations of these structures; as yet there were no stenotic symptoms.

CASE FOR DIAGNOSIS. Presented by Dr. GOTTHEIL.

Dorothy C., aged 21, born in the United States, was admitted to the City Hospital on October 3, 1913. Two years ago she had an itching rash on her body, called eczema by her doctor; 6 months ago she had another attack of the same. About 9 months ago she had a sore on her genitals and spots on her body; diagnosed syphilis by Dr. Robinson at the Polyclinic. On admission, no signs of active syphilis were seen; the Wassermann was positive. On her shoulders, chest and arms were a number (perhaps 25) bean-sized, very slightly elevated, skin-colored, soft tumors; they were hardly visible save in certain lights. She said that they had come out a few weeks before, were pinkish at first, and had then lost their color; for a week previous they had not changed. There were a number of small, soft, pinkish nodules on the back, breasts and arms, which, the patient said, were new lesions just beginning. No diagnosis was made on admission. Two biopsies made independently by Dr. Satenstein and the pathological laboratory of the hospital agreed in that the tumors were composed of hypertrophied connective tissue with no signs of infiltration, apparently excluding inflammatory conditions of all kinds; it seemed like the beginning of some degenerative process. During the next weeks there was a rapid increase in the number of tumors and in the size of the older ones; so that at the time of presentation to the Society, there were several hundred lesions on the skin of the chest, breasts, abdomen, thighs, back and arms. Many of them were as large as beans, forming distinctly pink, elevated, soft tumors; multitudes were

much smaller, but were growing slowly. Meantime the first lesions, which were present on admission, had retrogressed, and formed slightly elevated, colorless, wrinkled masses, with some apparent atrophy of the skin and deeper tissues.

EPICRISIS: November 30th: Condition unchanged, save that more tumors appeared, and the older ones had increased a little in size. In spite of the results of the biopsy, the physical appearances of the lesions were those of an inflammatory new growth. The patient had had three neosalvarsan treatments, without any effect on the eruption. The suggestion had been made that the case was one of neurofibromatosis in its early stage and of acute course. The case was to be further reported upon, at a future meeting.

DR. SATENSTEIN said that the only change he found in a microscopical examination of a lesion from the back, was hypertrophy of the connective tissue. He stated that the epidermis was apparently unchanged. There were absolutely no inflammatory cells of any nature to be seen anywhere in the section; the vessels, lymph spaces, the glandular structures were all unchanged; there was no degeneration of the elastic fibres. While new lesions were appearing all the time, none of the older lesions were disappearing. He believed that this might be the hypertrophic stage of a macular atrophy.

DR. MCMURTRY asked Dr. Satenstein if there was any marked increase in the connective tissue of the lesions.

DR. SATENSTEIN said he did not find any hyperplasia, only hypertrophy of the connective tissue.

DR. PAROUNAGIAN regarded the case as one of macular atrophy of the skin, as a number of the lesions showed distinct atrophy. The roseola-like lesions may have been the beginning of the process. He was also inclined to regard the case as one modified by syphilis, in view of the positive Wassermann and mucous membrane lesions in the throat.

DR. MOUNT said this case reminded him of some cases shown by Oppenheim of acute macular atrophy of the skin, where there was no atrophy at the beginning of the lesions, and only at the later termination, in the second stage, did atrophy set in. In some of these cases, the speaker said, the two stages were present at one time, the raised lesions being the beginning and the atrophied ones the terminal stage, of which the patient presented quite a number.

NÆVUS FLAMMEUS OF THE FACE WITH EXTENSIVE ANGIOMA OF THE BUCCAL MUCOSÆ, GUMS AND PALATE, AND DEFORMITY OF THE UPPER JAW BONE. Presented by DR. GOTTHEIL.

Frances McG., aged 19, came from the City Hospital. The points of interest in this case were the extensive involvement of the gum of the right upper jaw and the right side of the hard and soft palate, all of which participated in the hypertrophic vascularization. There was also some bony deformity of the right upper jaw, the interdental bone with the incisor teeth being displaced forwards. The patient claimed that the intra-oral lesions had been increasing lately, and had bled much on slight injury, but microscopical examination showed that there was nothing present but pure nævoid tissue. It was really a case of nævus unius lateris, the deformity extending along one side of the body only.

DR. SATENSTEIN said that a microscopical examination of a lesion of the mucous membrane showed no sarcoma or sarcomatous degeneration; only nævoid cells were present.

SYPHILITIC LEUCODERMA. Presented by DR. GOTTHEIL.

Elizabeth H., aged 15, was admitted to the City Hospital, Sept. 17, 1913, with a papular eruption of the forehead; nothing on the body; gonorrhœal vaginitis; the Wassermann was positive. The diagnosis was secondary syphilis;

treatment, mercury salicylate injections. About October 1st, while under observation, she developed gradually the very marked and extensive leucoderma which was present. The shoulders, upper back, chest and neck were studded with typical oval and circular leucodermic areas. The interest of the case was dependent on the fact that an extremely extensive and marked leucoderma developed in a secondary syphilitic, while in the hospital and while under mercurial treatment, and absolutely without any precedent eruption on the same area. In all previous cases of this kind presented to the Society, the evidence of the autochthonous development of a true leucoderma syphilitica had rested on the patient's statements; and this one settled, in Dr. Gottheil's mind, at least, the possibility of this occurrence, which had been doubted in some quarters.

VASCULAR NÆVUS OF FOREHEAD. RESULT OF TREATMENT WITH SOLID CARBON DIOXIDE. Presented by Dr. KINCH.

The patient was a female child, about one year of age. She was brought to Dr. Kinch the Spring previous to her presentation, with a vascular nævus on her forehead, the size of half a walnut, and protuberant. There were quite a number of veins in the affected area and the lesion was of a purplish color. At the time of presentation, the lesion had been markedly reduced by three applications of the solid carbon dioxide.

Dr. BLEMAN said he had had under his observation a patient with a nævus very similar to the one presented by Dr. Kinch's case. The speaker had tried the solid carbon dioxide snow on it, but it had absolutely no effect. In cavernous nævi it had no effect on the deep mass of blood vessels; solid carbon dioxide will bleach the skin covering the mass, the resulting scar tending to hold down the nævus by pressure.

Dr. Ochs said this case reminded him of one which he will present at the next meeting of the Society, occurring in a child having four lesions, one on the forehead, one on the arm, another on the abdomen and a fourth in the vulva. He stated that only a moderate pressure should be applied in the use of the snow on the mucous membranes, and the "burn" not made too deep because of the tendency to sloughing.

Dr. Pisko said he had treated a number of cases of cavernous angiomata with the solid carbon dioxide snow, and he had noticed that the pressure must be firm and one must not be afraid of applying it. He stated that by following this procedure the lesions would flatten out nicely and leave only a white pliable scar.

LUPUS ERYTHEMATOSUS LIMITED TO THE SCALP. Presented by Dr. BECHET.

The patient, E. C., a married woman, 36 years of age, first noticed the eruption on her scalp two and one-half years previous to her presentation. She had at the time of presentation two or three small patches at the vertex of the scalp, one of which was almost completely denuded of hair. The face was entirely free.

PSORIASIS LIMITED TO THE HANDS. Presented by Dr. BECHET.

R. Z., a female, 24 years of age, first noticed the appearance of the eruption on the hands, 3 years previously. Shortly thereafter, it spread to the body which had at all times been entirely free, but the eruption had never left the hands. The entire skin on the hands and lower part of the forearms was greatly thickened and fiery red. The nails were psoriatic. Several single patches could be seen on the upper forearm. The rest of the body was entirely free.

Dr. GOTTHEIL said that years ago we regarded all palmar psoriasis as syphilitic; now, of course, we all recognized the fact that true psoriasis of the palms did

occur, and not very rarely. But in the isolated cases in which psoriasis appeared first on the palms and soles, and remained, as it may, for a long period localized there alone, the diagnosis may be very obscure. Objectively the lesions may be absolutely indistinguishable from a palmar or plantar syphiloderma. A remarkable case of the kind had recently been under his observation, and was seen and treated by Dr. Fordyce and himself. The patient was a physician, who had never had syphilis and his serum was negative. For many months the obstinate eruption was limited to the palms and soles; it looked like syphilis, but a neosalvarsan course had no effect on it. Then an eczematoid dermatitis was diagnosed; but treatment for that was useless. Psoriasis was not thought of. But when, a little later, the patient fell into the hands of Dr. MacKee, the appearance of a typical psoriatic patch on the anterior surface of one wrist settled the question. It was of interest to note that the patient was treated by Dr. MacKee with the X-ray in full dose; his palmar psoriasis almost disappeared, but promptly returned. He was then placed under the ordinary antipsoriatic treatment, and doing well.

Dr. Ochs said that he had presented a young boy to the Society at a previous meeting, and that the psoriasis was confined to both palms absolutely.

CASE OF DIAGNOSIS. Presented by Dr. GOTTHEIL.

Antonio V., 23 years of age, was admitted to the City Hospital November 5, 1913. He had a chancre four years ago, followed by secondary symptoms; he had two injections of salvarsan in Venezuela. He came here one month ago, no symptoms of lues being present. Fourteen days ago, the eruption for which he was presented appeared, showing first as a large spot on the right inframammary region, soon followed by an abundant exanthem, covering trunk and limbs. Ten days ago he was given another salvarsan, evidently under the supposition that the eruption was luetic. When examined on admission, his whole body, with the exception of his face, lower legs and forearms, hands and feet, was covered with a papular and slightly scaly eruption, arranged in fairly parallel lines running into one another in places. Each line or row consisted of confluent yet distinct, soft, bean-sized papules, flat topped, very slightly scaly, and of a darker brownish color than his rather deeply pigmented integument. These rows of papules were so numerous and so closely aggregated as to cover fully one-half of the entire skin surface affected. There was absolutely no tendency to central clearing. On his right inframammary region was an infected and crusted oval area three inches by two in diameter; this, the patient said, was the first lesion, and had appeared two days before the general eruption. The only diagnoses thought of were an unusual form of erythema multiforme or a lichen planus. In the two days that had passed since the patient was admitted, the papules had grown larger and flatter, and the scaling had become more pronounced. The opinion of the Society was that the case was one of pityriasis rosea of unusual distribution and extent.

The resemblance of the case to the one pictured by Zumbusch, *Casus pro diagnosi, Ikonographia Dermatologica*, Fasc. II., Tab. xvi., was noted; the author's conclusion, four months after, was that the eruption was syphilitic, since it retrogressed spontaneously and without treatment.

Dr. GEORGE HENRY FOX said that he did not believe that it was either lichen planus or erythema multiforme, but that he would call the case pityriasis rosea.

NOTE, November 24th. A day or two after the presentation of the patient, the eruption began to change; and this change progressed so steadily that the diagnosis of pityriasis rosea could not be doubtful. The papules enlarged a little, became flatter and much more scaly, and finally disappeared, leaving circular, scaly patches, slightly decolorized in their centres.

He said that the interesting features in this case were the rapid onset and the multiplicity of the lesions.

Dr. BLEIMAN said that he would diagnose this case as one of seborrheic eczema.

Dr. Pisko agreed with Dr. George Henry Fox in the diagnosis of pityriasis rosea.

Dr. SATENSTEIN said he did not see anything in the lesions that would suggest pityriasis rosea, but that he would favor erythema multiforme or possibly a lichen planus. The speaker stated that the lesions were clearing just as typical erythema multiforme lesions did, and that when the patient had first been seen two days previous to presentation there was much less scaling.

Dr. PAROUNAGIAN was inclined to the diagnosis of lichen planus, on account of the dark purplish color and the extreme itching. In considering pityriasis rosea, the distribution and the color were against it.

Dr. BECHET said that some of the lesions in this case seemed to have been large vesicles or bullæ, and that he thought it was a case of erythema multiforme.

Dr. WEISS said that an erythema multiforme did not generally show lesions just like the ones presented, that he could see no lichen papules and that by the clinical appearance of the case he would diagnose it as one of pityriasis rosea.

Dr. MOUNT said that the patient showed every stage in the development of pityriasis rosea, from the small beginning papules to the retrogressing lesions. The scales were peripherally attached and when removed left the collarette, characteristic of pityriasis rosea.

GENERALIZED PAPULAR SYPHILODERM IN A PATIENT WITH ELABORATE TATTOOING. Presented by Dr. GOTTHEIL.

The patient was a male adult. A very abundant, general papulo-squamous sphiloderma covered this patient's body and limbs; the eruption was especially marked on the anterior surface of the forearms, each one of which was the site of an elaborate tattooing in blue and red, done a number of years ago. Not a single papule was present on the red (cinnabar) tattooings, while the blue areas and the normal skin were thickly studded with lesions.

LUES HEREDITARIA. Presented by Dr. OCHS.

The patient was a male colored child; two months ago he had syphilitic lesions confined to the penis and scrotum. The mother of the patient stated that the lesion started with a very small papule one month previously, which when first seen by the speaker was small, circular and somewhat indurated. Dr. Ochs said he had put the child on calomel internally and mercury externally. Mucous patches could be seen around the rectum.

DERMATITIS HERPETIFORMIS. Presented by Dr. PAROUNAGIAN.

The patient was a boy, 13 years of age, born in Russia. The history was as follows: The beginning of his skin affection was four years previously. It always started in the Fall and continued until Summer. During the Summer, he was almost free from his trouble. Both his parents were living and he had two brothers and three sisters, none of whom were troubled with any skin diseases. The lesions were grouped papules, forming patches, scattered over the whole body with the exception of the face and scalp. Pigmentation was quite pronounced on and around these patches. Itching was a prominent symptom.

Dr. Wise said that he included cases of this type under chronic, recurrent eczema.

BLACK PIGMENTARY NÆVUS. Presented by DR. KINCH.

The patient was a male adult, Italian by birth, aged 24, and showed a black pigmentary nævus on the upper lip and extending along the borders of the nose. It resembled a gunpowder stain. The color was black on the lip and over the lining of the nares and bulb of the nose a mottled brown. The man had had the condition since early childhood. The tip of the nose was covered with fine, downy hair. The interesting features of the case were the location of the lesion in the median line and the statement of the patient that the color had faded during the past two years without treatment.

DR. GOTTHEIL said that the case was a splendid one for treatment with solid carbon dioxide, provided the right technique was employed. The hairs should be first completely removed by electrolysis. This could not be done by freezing, as the great depth of the papillæ in the subcuticular tissue would necessitate entire destruction of the skin to do so. Much of the pigmentary and hypertrophic mass would disappear under this alone; and the solid carbon dioxide snow could then be used to complete the cure.

GUMMATA OF THE BREAST. Presented by DR. PAROUNAGIAN.

The patient was a female adult, Russian, aged 37 years. About a year ago she had an operation performed on her right breast. Four months ago a sore developed on the same breast, about two inches from the nipple, for which she applied to two hospitals, where radical operation was advised. Two months ago she called at the Gouverneur Clinic for treatment. Upon examination, an ulcer about the size of a silver dollar was seen. It was exuding a gummy, purulent matter; the edges were undermined; there was another swelling just below the nipple which later ulcerated in the same manner as the first lesion. The Wassermann reaction was "plus minus" and no history of lues was obtainable. One intramuscular injection of mercury salicylate and some potassium iodide was administered, which improved the lesions noticeably; thereupon two small doses of salvarsan were given, which healed the lesions promptly.

MULTIPLE EPITHELIOMATA. Presented by DRS. MACKEE and WISE.

The patient, who was from Dr. Fordyce's clinic, was a female adult, 30 years of age; she was born in Russia. She presented eight epitheliomata scattered over the face. The smallest was no larger than the head of a very small pin. It was slightly elevated, waxy appearing and had a central depression. The largest tumor was the size of the thumb nail, with hard, rolled edge and an ulcerating centre. There were no keratoses. The oldest tumor was first noticed four years ago.

DR. GEORGE HENRY FOX said that he often punctured such lesions with an ordinary dental burr, dipped in carbolic acid and destroyed the morbid tissue by boring in all directions, as a dentist destroyed the carious mass in a dental cavity before filling a tooth. The resulting ulcer quickly healed by granulations and left a soft, smooth scar. This treatment was simple, speedy and efficient.

DR. WEISS said that he had had very good results in a case similar to Dr. MacKee's by the application of the curette and a 5 per cent. scarlet red ointment.

PAPULO-SQUAMOUS SYPHILIDE. Presented by DR. PAROUNAGIAN.

The patient was a male adult, 31 years of age, from Dr. Pollitzer's Clinic at the N. Y. Post Graduate Hospital. About three months previously, he had a genital sore, the remains of which were still present. The eruption was general and very extensive, the distribution being that of psoriasis, favoring the

extensor surfaces of the arms, and abundantly scaly. The back was covered with small discoid, dark-brownish papules; the face and neck had large elevated papules, nummular in shape. Moist papules were present at the angles of the mouth, some of the lesions on the body being annular in type. The Wassermann reaction was strongly positive.

CLINICAL SESSIONS OF THE THIRTY-SEVENTH ANNUAL MEETING OF THE AMERICAN DERMATOLOGICAL ASSOCIATION.*

NEVUS UNIUS LATERIS. Presented by Dr. CARMICHAEL, Washington.

The patient was a boy, 10 years old, with lesions of a warty character over the right half of the body. The arrangement of the lesions was linear and they were of congenital origin.

MORPHŒA. Presented by Dr. CARMICHAEL.

The patient was a white woman, 40 years old, with an oval patch under the left breast and another larger patch over the right abdomen. These were of a whitish-yellow color, surrounded by a violaceous zone, and were of several years' duration.

MORPHŒA. Presented by Dr. CARMICHAEL.

The patient was a white woman, 55 years old, with a large oval patch on the left shoulder. It had made its appearance about 2 years ago, and was hard and leathery to the touch and ivory-like in appearance, encircled by a pinkish zone.

CASE FOR DIAGNOSIS (PARAPSORIASIS?). Presented by Dr. CARMICHAEL.

The patient was a white man, 40 years old, with an eruption over the flexor and extensor surfaces of the arms, shoulders, abdomen, buttocks, thighs and legs. The eruption, which was of 7 years' duration, consisted of sharply defined, slightly scaly patches of a pale, red color.

Dr. STELWAGON made a diagnosis of parapsoriasis.

Dr. RAVOGLI thought it was a lichen planus.

Dr. POLLITZER regarded it as a parapsoriasis lichenoides.

Dr. GEORGE H. FOX said the case was a rather unusual one, and he had no diagnosis to suggest.

Dr. GILCHRIST suggested that sections be taken and examined. As for treatment, he advised the use of the X-rays.

CASE FOR DIAGNOSIS (TUBERCULOSIS CUTIS?). Presented by Dr. CARMICHAEL.

The patient was a negro, 55 years old, with an eruption which surrounded the neck and extended downward over the chest and shoulders. It was of long dura-

* The clinical sessions were held at the George Washington Medical School and at the Army Medical School, Washington,*D. C., May 6-8, 1913.

tion, probably 35 or 40 years; the lesions about the neck and chest were elevated, with here and there small sized abscesses, exuding pus. Some of the other lesions were warty and scarred in character, presenting a keloidal appearance. On the left side of the abdomen and left thigh there were isolated, warty growths of a firm, papillomatous character, suggestive of tuberculosis verrucosa cutis. Examinations for the yeast fungus and the tubercle bacillus had proven negative, and there had been no improvement under specific treatment. The disease had gradually spread. Dr. Carmichael thought the diagnosis rested between tuberculosis cutis verrucosa and blastomycosis.

Dr. ORMSBY said that in a general way, he did not regard this as a case of blastomycosis. In the latter affection, the edges of the lesions were comparatively level and not broken up into nodules, as we saw here. There was also less inflammation in this case than we usually saw in blastomycosis, and the long duration of the disease also militated against that diagnosis. The diagnosis could be positively settled with the microscope.

Dr. PUSEY said he did not think the duration of the disease was a very strong argument against the possibility of its being blastomycosis. In one case in an old farmer which he has had under his observation, the lesions involved the trunk in a manner very similar to that observed in this case, and the disease had lasted for years.

Dr. POLLITZER said he was inclined to regard the case as one of tuberculosis cutis.

Dr. CORLETT thought the case was one of blastomycosis.

Dr. RAVOGLI thought the eruption was a form of lupus, and had nothing to do with blastomycosis. In the latter disease we had small abscesses; not nodules like those seen here. The duration of the disease was also against blastomycosis, as the patient could scarcely survive for so long a time without metastases.

Dr. HOWARD FOX thought the case was one of cutaneous tuberculosis. It bore a close resemblance to the case of a mulatto woman whom he had shown a number of times in New York. In that case, the tubercle bacilli were found, and by animal experimentation it was definitely proven to be a case of cutaneous tuberculosis.

Dr. HARTZELL said that while the lesions resembled those of blastomycosis, he was rather inclined to think the case was one of cutaneous tuberculosis because of the failure to demonstrate the organisms of blastomycosis.

Dr. STELWAGON also favored the diagnosis of cutaneous tuberculosis.

Dr. CARMICHAEL said a pathological examination showed that the pus from the lesions was negative, excepting for the presence of the staphylococcus.

Dr. TRIMBLE said that in the cases of blastomycosis he had seen, there was more moisture connected with the lesions than with those of tuberculosis verrucosa cutis. For that reason, he would favor the diagnosis of tuberculosis cutis in this case.

CRETINISM. Presented by Dr. CARMICHAEL.

Dr. Carmichael presented 2 negro children, brother and sister, aged, respectively, 16 and 19 years. Both of these children were greatly stunted in growth, with a misshapen cranium, swollen abdomen, and the vacant stare and stupid countenance common to cretins.

Dr. PUSEY thought the occurrence of this condition in 2 children of the same family was of interest. He suggested the use of thyroid extract.

ICHTHYOSIS. Presented by Dr. CARMICHAEL.

Dr. Carmichael presented a baby, 13 months old, with a rough, dry skin. The roughness was partly due to a slight scalliness and also to a hyperkeratosis around the hair follicles. The condition was generalized, but more especially marked over the extensor surfaces of the extremities. It was of congenital origin.

Dr. PUSEY thought there was a congenital defect of the skin, with hyperkeratosis about the hair follicles.

Dr. HARTZELL regarded it as a follicular keratosis.

ACNE INDURATA. Presented by Dr. HAZEN.

Dr. Hazen presented a negro boy, 17 years old, with a severe acne indurata of 2 years' duration. After 6 weeks' treatment, consisting of local surgical measures and antiseptic ointments, there had been considerable improvement.

CASE FOR DIAGNOSIS (LUPUS ERYTHEMATOSUS OR SYPHILIS?).

Presented by Dr. HAZEN.

The patient was a negro, 61 years old, with nodules, of 10 years' duration on the face and scalp. Many of these had been excised and their bases cauterized, with the idea that they were malignant. The Wassermann test was positive, and a biopsy showed the presence of a perivascular plasma and round-celled infiltration, resembling lues. The patient had improved under the administration of salvarsan and mercury.

Dr. GOTTHEIL thought it was a case of lupus erythematosus.

Drs. HARTZELL AND ORMSBY agreed with Dr. Gottheil. Possibly we had here a combination of lupus and syphilis.

After the presentation of these cases, the members of the Association visited the Army Medical School, where (by invitation) a demonstration was given by Capt. Charles F. Craig, U. S. A. and Capt. Henry Nichols, U. S. A. Capt. Craig explained the method of treating syphilis in the U. S. Army. A combination of the Wassermann and Noguchi tests was used. The tests were repeated every month or two, and the results were classified as negative, plus minus, plus and double plus. The last was considered positive. Plus might or might not be positive, according to the character of the test. Plus minus was looked upon as doubtful and was repeated. The reading of these reactions, Capt. Craig said, was to a large extent a matter of experience. What one man might call plus another might call plus minus or double plus.

Capt. Nichols showed a number of specimens, including mice inoculated with the *spirochæta pallida* and with yaws, and a rabbit showing the lesion of yaws on the scrotum. Another rabbit was shown with an indurated mass on the scrotum, the result of syphilitic inoculation, which was quite distinct from the lesion of yaws. In a number of rabbits that had been inoculated in the testis with the *spirochæta pallida*, a syphilitic keratitis developed. Growths of the blastomyces, actinomyces and sporotrichium were also shown.

REVIEW
OF
DERMATOLOGY AND SYPHILIS.

Under the direction of

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Assisted by

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DEUTSCHE MEDIZINISCHE WOCHENSCHRIFT.

(Jan. 1, 1914, xl, No. 1.)

Abstracted by CLARENCE ALLEN BAER, M.D.

CONTRIBUTION TO THE QUESTION OF THE RELATION OF PSORIASIS TO TUBERCULOSIS. WARNECKE, p. 26.

Menzer, in 1912, designated psoriasis as a skin symptom of constitutional bacterial disease and maintained that psoriasis is the accompaniment of a localized gland tuberculosis. Warnecke says psoriasis is a true skin disease and relates in detail the history of a case in which it was produced by tuberculin injections.

(*Ibidem*, Jan. 22, 1914, xl, No. 4.)

CONGENITAL SYPHILIS AND SERODIAGNOSIS. R. LEDERMANN, p. 176.

The significance of serodiagnosis for the recognition of congenital syphilis is not yet clear on all points. Blood for the reaction must not be taken during or shortly after a period of fever. A positive Wassermann in very sick children without manifestations of syphilis should be interpreted with caution. A Wassermann reaction may be negative in an infant free from symptoms of syphilis and remain negative for a long time and not appear positive until months after birth. Sixty-seven children under one year of age were examined with few positive sera, although known to be syphilitic; 18 children between 1 and 5 years of age were examined, with few positive sera; 58 cases showed positive sera after the sixth year.

TESTIJODYL, A NEW IODINE-IRON-ALBUMEN PREPARATION. ARTHUR BLUMENTHAL, p. 180.

THE ADVANTAGES AND DISADVANTAGES IN THE USE OF THE
VARIOUS APPARATUSES FOR PHOTOTHERAPEUTICS. LEOPOLD
FREUND, p. 183.

The author considers electric arc light, Schott's Uviol light, Kromayer's quartz lamp and the Finsen light.

MUENCHENER MEDIZINISCHE WOCHENSCHRIFT.

(Jan. 6, 1914, lxi, No. 1.)

Abstracted by A. W. STILLIANS, M.D.

TREATMENT WITH SALVARSAN-COPPER. G. BAERMANN, p. 1.

Ehrlich sent this new salt to be tried in amebic dysentery; but in this disease it failed utterly. In frambesia, malaria and leprosy, however, encouraging results were obtained. Whether it surpasses in value salvarsan itself is doubtful.

THE COMBINED ACTION OF ETHER AND RADIUM ON EMBRYONAL
CELLS. V. HAECKER and N. LEBEDINSKY, p. 7.

Ether and chloroform have the effect of causing the cells of the growing eggs of cyclops to resemble, in their method of nuclear division, the least differentiated cells, those destined for procreation of the race. In view of the fact of the selective action of radioactivity on these cells, it occurred to the authors that possibly ether might be used to sensitize the cells of malignant growths to radioactivity.

A series of experiments showed that the eggs treated with ether were very much more susceptible to the rays than the controls. The authors did not succeed in killing the etherized eggs with a dose of radium safe for the controls; but are satisfied that they have established the fact of the combined action of ether and radium.

TREATMENT OF MALIGNANT TUMORS. LUNCKENBEIN, p. 18.

Not satisfied with his results from the subcutaneous injection of autolysates of malignant tumors, the author has tried intravenous injections on 15 inoperable cases. He saw marked effects in these hopeless cases. Within a few days the glands disappeared, the swelling about the tumor decreased, the tumor itself softened, grew smaller and became less fixed. These good effects were accompanied by rather severe reactions, never lasting more than 3 or 4 days. He believes that extracts freshly prepared and diluted according to his technique can be used without danger in 25 cc. doses, and that the intravenous method is of value. He cites cases, apparently hopeless, which were made operable or greatly improved by the injections. He warns against the use of old extracts.

(*Ibidem*, Jan. 20, 1914, lxi, No. 2.)

THE VALUE AND THE METHOD OF ASCERTAINING THE LUETIC
INDEX. P. B. SORMANI, p. 69.

That the method is very complex the author acknowledges; but he states that it is nevertheless entirely practicable. He claims that by its use paradoxical reactions do not occur, that it is the best means of following the effect of treatment,

that the paralytic nervous diseases can always be diagnosed by it alone, and that by the varying strength of the reaction, tabes, general paresis and cerebro-spinal lues can be differentiated. Besides titrating with decreasing amounts of antigen, his chief departures from the original technique are:

First. Instead of using twice the titre of complement, he makes a second titration against the full dose of antigen, and uses for the test the least amount of complement giving complete hæmolysis.

Second. He sensitizes the sheep's corpuscles with amboceptor and then washes them carefully just before use.

Other details of technique are given.

THE PRACTICAL VALUE OF THE QUANTITATIVE WASSERMANN REACTION IN THE TREATMENT OF SYPHILIS. FRITZ LESSER, p. 70.

The author emphasizes the need of watching the serum reaction by quantitative determination of its strength. In this way only can the effect of treatment be accurately determined and the value of various drugs and various methods of administration be compared. When one thinks that perhaps the majority of syphilis now under treatment are taking it only because they have a positive Wassermann, it is plain that the quantitative measurement of the reaction is of great importance.

The strength of reaction is no sure indication, however, of the virulence of the infection, or of the kind or length of treatment necessary for a cure. It can be said, though, that the more intense the treatment, the greater the effect on the Wassermann reaction.

The quantitative test is of the greatest value in showing the presence of arsenic-fast or mercury-fast spirochætæ.

The author mentions the great variations in individual susceptibility to the various methods of administration of mercury and states that, while in the early stages of lues, salvarsan has a quicker and more constant effect on the serum reaction, he believes that in the late stages mercury is on the whole more reliable.

His technique consists of titrating with lessening amounts of serum, with lessening amounts of antigen, and with increasing amounts of complement. The first and last methods are, in his experience, the most reliable.

SPOTTED FEVER AND ROSEOLA. EUGEN FRAENKEL, p. 57.

Macular lesions from two typical cases of typhus were excised, kept in grape sugar bouillon for eighteen hours, washed in running water, fixed in Mueller-formol and the sections stained with the Pappenheim panoptic method. In both specimens peculiar nodular infiltrations of mononuclear cells were found about the arterioles of the pars reticularis.

In places this cell accumulation was so heavy that the blood-vessel wall was obscured, in other places the intact media and the swollen intima could be seen. Between these infiltrations the wall appeared normal. The author declares that this picture is an absolutely new one and diagnostic of typhus. The only condition at all similar is arteritis nodosa of Kussmaul and Maier; but this affects usually larger branches of the coronary, renal or intestinal arteries, less often the pulmonary or cerebral. It is accompanied by necrosis and hæmorrhage in the media, widespread thrombosis in the area supplied by the artery, and finally results in rupture aneurisms, due to the softening of the arterial wall.

In the typhoid macules no nodular infiltrations about the vessels are found; but by the author's method, the bacilli are always to be found in the pars papillaris or reticularis. The typhoid process is a parenchymatous inflammation of

the skin, while typhus is characterized by the typical nodular infiltration about the finer arteries.

The frequent difficulty of diagnosing typhus is emphasized, and it is suggested that if this lesion of the arteries is found in the internal organs, it will be of great value in post-mortem diagnosis, when the absence of the roseola leaves the pathologist entirely at sea.

ON THE TECHNIQUE OF THE PALLIDIN REACTION. E. KLAUSNER,
p. 73.

In over 1,500 cases tested with this extract of the lungs of pneumonia alba, the test was constantly specific. Four slight incisions, crossing at right angles, were made on the arm and the pallidin rubbed into them and allowed to dry. The author considers the test of equal value with the Wassermann reaction in tertiary and hereditary syphilis. Early syphilis was always negative. Over 1,200 controls with other diseases were always negative. The phenomenon described by Mueller and Stein, of the Finger clinic, was observed once in this series. This consists of a reversal of a negative Wassermann reaction to a positive in latent cases a few days after a positive pallidin reaction.

No case of syphilis of the circulatory system, tabes or general paresis give a positive reaction. The test is positive especially in untreated or insufficiently treated cases of tertiary or hereditary lues. In view of the large number of tests reported it would seem desirable that a more detailed report be made.

PRELIMINARY REPORT ON THE COMBINED TREATMENT OF CARCINOMA WITH ROENTGEN RAYS, MESOTHORIUM AND INTRAVENOUS INJECTIONS. GUSTAV KLEIN, p. 115.

The author gives his method of intensive combined treatment, and cites several severe inoperable cases cleared up in this way. He gives details of technique, dosage, filters, etc., and is of the opinion that intravenous injections of enzytol, or of radium-barium-selenate, have produced the desired effect with a smaller dose of rays than would have been otherwise necessary.

He warns against the increased danger of overdosage in the combined use of mesothorium and X-rays, and emphasizes that: "It must be generally understood that the treatment with radioactive agents is neither easy nor free from danger."

(*Ibidem*, Jan. 20, 1914, lxi, No. 3.)

PHYSICAL AND BIOLOGICAL EFFECTS OF RADIOACTIVE SUBSTANCES, ESPECIALLY OF MESOTHORIUM, AND THE SUBSTITUTION THEREFOR OF ROENTGEN RAYS. C. MUELLER,
p. 134.

The theory of Bragg, that the gamma rays are themselves without effect on the tissues, but are only effective in so far as they are changed in the tissues into beta rays, is upheld by the author. The absorption of gamma rays in 1 cm. of tissue is declared to be only 4% instead of 10%, as heretofore held.

The very fact that the best therapeutic results began to be obtained in the moment that the use of filters of heavy metal began, is suggestive that the effects are due to the beta rays produced secondarily in the filter. But the fact that the rays themselves penetrate only about 1 cm. into the tissues does not mean that their effects do not reach more deeply. The ionising action of the rays, destroying lecithin and splitting off cholin, carries the work much farther into the neighboring tissues.

The indications for radio-active substances and for Roentgen rays are as fol-

lows: 1. In all deep-lying tumors and all tumors covered by a layer of healthy tissue, Roentgen rays are indicated. Up to the present, no case is known in which radium or mesothorium has dispersed a deep-lying tumor covered by healthy tissue, while the exact dose of Roentgen rays can be brought to the desired depth with no injury to overlying tissue.

2. Tumors upon which or into which a radio-active substance can be fixed without danger to healthy tissue, are more certainly and easily treated with careful dosage of radio-active substance.

3. In such cases the action close to the radio-active body is strengthened by the interposition of a filter of heavy metal.

4. The possibility of substituting Roentgen rays for the more expensive radium preparations depends on the possession of an apparatus that can produce abundant gamma rays close to the surface to be treated, a filter of heavy metal being interposed.

(*Ibidem*, Jan. 27, 1914, lxi, No. 4.)

INTENSIVE RADIOTHERAPY OR DIVIDED DOSAGE. S. LOWENTHAL AND A. PAGENSTECHER.

The present rage over radium and mesothorium in large dosage is not altogether justified in the opinion of the authors. They think that of the two elements that make the unit of radio-activity, "Milligram-hours" time is the more important, and that small doses, well filtered, over many days, are much more valuable than large doses at long intervals. They hold that the same is true also of Roentgen treatment.

By experiments with Roentgen rays they have found that a filter of lead 1 mm. thick requires seventy times the exposure for a certain effect on the surface as a filter of 3 mm. aluminum. But at the depth of 10 cm. in the tissues, the lead filter requires only twenty times as long an exposure as the aluminum. They therefore use in the treatment of malignant growths a 1 mm. lead filter and daily treatments over months.

RUSSKI JOURNAL KOJNIKH E VENERICHESKIKH BOLEZNEI.

(September and October, 1913, xxvi, No. 9.)

Abstracted by M. L. RAVITCH, M.D.

NÆVUS PIGMENTOSUS. BURJANADZE, p. 145.

Reporting a case of nævus pigmentosus linearis mollis in Prof. Himmel's clinic, Burjanadze made a thorough investigation of the ætiology of this affection.

The patient, a female, aged 23, was in comparatively good health. She had a peculiar warty growth on the face and upper part of the body for fifteen years. On the body the growths were grouped in linear form. Some of them were somewhat elevated and resembled colored cabbage, while others were highly raised from the skin. The raised places were strongly pigmented, while the others were of a very slight color. While many places were symmetrical and uniform, some were atypical and non-symmetrical. At the left angle of the mouth and on the neck there were patches of vitiligo.

Going into the ætiology of this affection, the author was confronted with the various theories in regard to its causes. Baerensprung finds this disease allied to herpes zoster and the process due to the diseases of the spinal ganglia.

Spietschke holds *navus linearis* as a nervous manifestation. Th. Simon calls it nerve-*navus*, since the attack can only be traced to some nerve lesion. According to Phillipson, Voight's lines (i.e., the intermediate zone between two neighboring nerves) are often seen in this disease. Burjanadze does not fail to mention Unna's opinion that *navus* may have its origin from an injury to the *fœtus in utero*.

A CASE OF *NEVUS HYPERKERATOSICUS (ICHTHYOSIFORMIS) SYSTEMATICUS ET GENERALISATUS*. LEVCHENKOV, p. 118.

Levchenkov's case from Prof. Zelenev's clinic is more extensive than the one quoted by Burjanadze. The case was studied in a more thorough manner. Levchenkov contends that it was Baerensprung who, in 1863, first described a group of congenital *navi* with a tendency to form in bands following certain lines or limited to diffused areas. Since then, such formations have been described under different names: *navus unius lateris* (Baerensprung); *navus neuroticus* (Neumann), *navus linearis verrucosus* (Unna), *ichthyosis cornea s. hystrix partialis* (Phillipson), *navus linearis ichthyosiformis* (Lanz), *navus verrucosus zoniformis* (Brault), etc. Hallopeau and Besnier and, later, Jadassohn adopted a very appropriate and suggestive name: "*Nævus systematosus*."

In the majority of cases the disease is localized only on one side of the body. It usually takes in only small areas. Aside from cosmetic appearances, it very seldom bothers the patient. A case is described by the author under the name of *hyperkeratosis systematosus*. The case reported by the author came under observation in 1912 and is under observation at the present time. Biopsy was made twice. The case had a twofold significance: 1. The changes in the skin were symmetrical and occupied large areas. 2. There was noticed a decided tendency toward Lanyer's and Voight's lines. The description of the case is quite extensive. The illustrations are fine; the histological and pathological findings thorough. The patient is under treatment now and his condition has improved. With cessation of treatment, it was noticed, the disease returned to its former status.

WHAT IS THE OBJECT OF KERATOPLASTIC ACTION OF CERTAIN REMEDIES? BORUKHOVITCH, p. 158.

Borukhovitch makes a plea for a more thorough knowledge of application of keratoplastic remedies. He says that very valuable remedies have been used without thorough knowledge of them. Remedies that would have been found very beneficial proved to be harmful on account of the percentages of strength that were used. In treating ulcers, he found that lapis used in strong solution damaged the epidermis to a great extent and the result of the treatment was very bad; while using the same remedy in solutions of one-half to one per cent., the treatment was very effective and the healing of the ulcer ensued at once. In regard to balsam Peru, the author has found that light applications on an ulcer and subsequent applications of a bland ointment, gave better results than prolonged treatment of strong salves and balsam of Peru itself.

A CASE OF *HEMISPOROSIS*. BALZER AND BELLOIR, p. 178.

Mescherski reports Balzer's and Belloir's case, in which the patient was a vegetable and fruit carrier. He was first afflicted with *furunculosis* of the neck, later he had a swelling on the spine between the scapula. The swelling, at first quite small, began to enlarge and suppurate. Two months later the tumor turned into an ugly sore, about the size of a dollar, with slightly elevated and infiltrated borders. The bottom was uneven, ragged, partly covered with yellow-brownish

scabs, from which, on pressure, exuded a seropurulent fluid. The sore bled very easily. The neighboring glands were slightly swollen. The Wassermann reaction was negative. A culture was made on malt-agar. A typical culture of *hemispora stellata* (Vuillemin) was found. As in the majority of the mycotic diseases, iodine medication gave good results.

ATTEMPTS TO TREAT DERMATOSES WITH HUMAN SERUM. Heuck, p. 168.

Mescherski, reviewing Heuck's article, states that Heuck's experience with Bruck's method of treating dermatoses with human serum is not very encouraging. He did not obtain any good results. On the other hand, Linser's method with human serum gave some results. It gave good results in pruriginous dermatoses (pruritus and urticaria); indifferent results in bullous dermatoses (pemphigus, Duhring's disease); no results were obtained in psoriasis. Intravenous injections gave better results than subcutaneous. In some cases, injection of serum from a healthy subject caused aggravation of the eruption. Some cases have been found utterly unfit for such treatment.

AMERICAN JOURNAL OF THE MEDICAL SCIENCES.

(January, 1914, cxlvii, No. 1.)

(Abstracted by R. C. JAMESON, M.D.)

EXPERIENCE WITH NEOSALVARSAN AT THE HARLEM HOSPITAL. HOWARD FOX, p. 97.

Fox gives the results of his work with one hundred and seventy-five injections of neosalvarsan, both intravenous and intramuscular, in all types of syphilis, without using any other antisyphilitic remedy. His results correspond to those obtained by others in that he found it to be a remedy with an action less efficacious than a corresponding amount of salvarsan. The effect of neosalvarsan upon the Wassermann reaction is not marked and is much less than with salvarsan, no case in the series going negative after either the intravenous or intramuscular injections.

The greatest advantage possessed by neosalvarsan is the ease and rapidity of preparation and injection and the slight disturbance caused in the vessel walls.

CAN IT BE PROVED FROM CLINICAL AND PATHOLOGICAL RECORDS THAT THE NUMBER OF CASES OF CANCER WILL BE GREATLY DECREASED BY THE PROPER EXCISION IN THE EARLIEST PRECANCEROUS OR CANCEROUS STAGE OF THE LOCAL DISEASE? J. C. BLOOGOOD, p. 76.

Bloodgood considers benign pigmented moles and connective-tissue tumors, sarcoma of the skin and soft parts, epithelial tumors, carcinoma of the breast and lip. The article is a plea for early and complete surgical interference, and education of the laity to have surgical measures taken before malignant degeneration sets in. Surgery will not always cure or prevent malignancy, but from his statistics it is proved that in a good percentage of cases where seemingly benign tumors were excised, malignancy had already set in. The percentage of cures in sarcomata of the soft parts is very small, but in other conditions the percentage of cures can be raised by *early* and *complete* excision.

JOURNAL OF TROPICAL MEDICINE AND HYGIENE.

(Dec. 1, 1913, xvi, No. 23.)

Abstracted by R. C. JAMIESON, M.D.

SALVARSAN IN FILARIASIS. E. R. BRANCH, p. 364.

Branch reports his observations on a number of cases in which syphilis and filariasis co-exist and in which salvarsan has been used for the syphilitic infection.

He found that the microfilariae and the fever disappeared after treatment, that ulcerations healed, the affected limbs becoming smaller in diameter, and that the general health of the patients so treated improved. Two cases had recurrences which were slight and disappeared on further treatment.

(Ibidem, Dec. 15, 1913, xvi, No. 24.)

PYOSIS TROPICA IN THE ANGLO-EGYPTIAN SUDAN. A. J. CHALMERS AND W. R. O'FARRELL, p. 377.

This is an interfollicular pus infection occurring chiefly in Asia and Africa. It is due to a pus organism which the authors have isolated and think is specific for the disease and not previously described. They enumerate the various points of difference between this organism and other similar organisms causing like conditions and suggest the name *Micrococcus pyogenes tropicus* (Chalmers and O'Farrell).

Infection takes place through an abrasion, forming papules, papulo-vesicles and pustules, which burst and give off a serous exudate. This exudate dries in yellow crusts, under which are small, superficial ulcers. The arms and legs commonly are attacked, but *only* between the follicles. Active treatment with anti-septics and autogenous vaccines affords a very favorable prognosis.

UROLOGIC AND CUTANEOUS REVIEW.

(October, 1913, i, No. 4.)

Abstracted by R. C. JAMIESON, M.D.

SYPHILIS IN CATTLE, PRODUCED BY MEANS OF THE PURE CULTURE OF THE CONTAGION. MAX VON NIESSEN, p. 328.

Von Niessen used a bacillus, which he has cultivated for thirteen years, that he terms the bacillus of syphilis, but considers it distinct from the *treponema pallidum*.

His experiments were conducted upon native Chinese cattle, using a bouillon extract of his syphilis bacillus, which he distinctly states contained no spirochæta. Four weeks after inoculation, there appeared on another part of the body an area of alopecia and in the nose, a mucous patch. The alopecia areas gradually became more generalized and after ten weeks, a small crusted exanthematous spot appeared on the forehead. Involution of lesions began three months after injection.

He considers this a typical case of bovine syphilis, due to injection of cultures obtained from human syphilis. He also states that his bacillus has produced "gummata in the hog, intestinal lues in the horse and hog, skin syphilis of

various kinds in the ape, rabbits and the hog—a species of bacteria, moreover, which not only had been obtained from the blood in three hundred cases of human syphilis of all forms and in all stages, and had been identified, but had also been capable of reproduction in pure culture from the blood of the infected animals.”

His statements are interesting, although widely at variance with the accepted teachings of the cause and transmissibility of syphilis, but he is firm in his belief that his bacillus can cause bovine syphilis which is as closely related as possible to the human type.

THE FUNCTIONAL NERVOUS DISTURBANCES OF QUATERNARY HEREDITARY SYPHILIS. E. GAUCHER, p. 346.

Gaucher classifies hereditary syphilis as secondary, tertiary, quaternary (corresponding to parasyphilis) and quaternary, comprising congenital malformations and dystrophies.

Under quaternary hereditary syphilis he places disturbances of the nervous system, cerebral sclerosis, infantile spasmodic tabes, juvenile tabes and general paralysis, hereditary ataxy and certain forms of infantile paralysis. He also classes with quaternary hereditary syphilis, functional dynamic disturbances without known lesions, as convulsions, cephalalgia, epilepsy, neurasthenia, imbecility and mental degeneracy, also disturbances of the cerebrospinal equilibrium. He considers these in detail, giving reports of cases. In conclusion he states “without a doubt the list of nervous functional derangements due to quaternary hereditary syphilis does not end here.”

LIGHT TREATMENT OF SKIN DISEASES. ALFRED BLASCHKO, p. 351.

This article deals with the history of the use of light rays in dermatology, the use of the Finsen light and quartz lamp. He recommends its use in lupus, superficial bacterial infections, acne vulgaris, acne rosacea and eczema.

ON THE PATHOLOGIC HISTOLOGY OF LICHEN PLANUS WILSONI. I. F. ZELENOW, p. 358.

A lengthy and complete description of the above condition, illustrated with numerous photographs and photomicrographs.

TRAVELS OF THE TREPONEMA PALLIDUM THROUGH THE LYMPHATIC AND BLOOD CURRENTS: MANNER OF DISSEMINATION OF THE SYPHILITIC VIRUS. AN ESSAY IN PATHOGENY. CHARLES FOUQUET, p. 370.

Fouquet believes that the general infection with syphilis is very rapid and is carried by the blood current, the organisms multiplying rapidly and pushing themselves into the capillaries. Treponemata have been found in the capillaries of chancreous lesions, but the capillaries have a double coat to prevent entrance, the lymph spaces none, thus accounting for the preponderance in the lymphatic spaces.

Opposed to his belief are the facts that syphilis does not develop like a sanguineous infection, nor are cases of infection found during the prechancre stage from infection with the blood. Gaucher has shown that successive chancres are possible on the same individual, provided they develop in different lymphatic regions. He explains this on the ground that general immunity does not exist until about twelve days after the chancre appears. The article further states that in the author's opinion the infection first spreads by the lymphatic system, later by the blood.

NEW METHODS OF DERMOTHERAPY. EDWARD SCHIFF, p. 375.

Schiff considers electrotherapy, light therapy, massage, Roentgen ray, hydrotherapy and hot air in the treatment of dermatoses, but offers nothing new.

AN INVESTIGATION INTO VARIOUS FACTORS INVOLVED IN THE TRANSMISSION OF LEPROSY. T. SUGAI AND I. MONORE, p. 379.

The authors conducted a number of experiments with the blood of leprous newborn and conclude that bacilli in the testicle can reach the seminal vesicles. Tubercle bacilli in the semen remain active and, in addition to lepra bacilli and cocci, can be transmitted to offspring. Their findings would tend to overthrow some accepted theories, as they hold that a direct paternal heredity and maternal infection in leprosy and tuberculosis cannot be excluded.

THE RELATIONS BETWEEN DISEASES OF METABOLISM AND DERMATOSES. JULIUS HELLER, p. 382.

The author discusses briefly the dermatoses occurring in connection with metabolic diseases (dermatoses due to gout and diabetes), in anomalies of metabolism and internal secretions.

He considers Addison's disease with pigmentation, vitiligo, urticaria and purpura; the skin changes in thyroid conditions, pituitary alterations and metabolic disturbances of the genital organs.

INDIANAPOLIS MEDICAL JOURNAL.

(November, 1913, xvi, No. 11.)

Abstracted by CHARLES T. SHARPE, M.D.

REPORT OF A CASE OF PELLAGRA WITH AUTOPSY AND A STUDY OF THE DISEASE IN THE LIGHT OF MODERN RESEARCH. MAX A. BAHR, p. 468.

This essay is an excellent résumé of the subject with reference to the pathological findings, especially of the nervous system.

Babes and Sion were the first to study microscopically the lesion of the skin. They describe a slight serous exudation and leucocytosis in the erythematous stages, together with the presence of peculiar metachromatic masses which they consider to be coagulated albumin. They did not note changes in the nerves. In the stage of desquamation and hyperkeratosis the papillæ of the corium contain lymphoid and plasma cells and a few mast cells. The sweat glands are atrophied. They consider the thickening of the skin is a result of increased blood supply. The elastic tissue fibrils in the superficial layers of the derma are swollen and show degenerative changes.

The bibliography contains nineteen references.

THE PRACTICAL VALUE OF THE WASSERMANN REACTION. MORITZ WOLFF, p. 389.

Wolff's article shows the value of this reaction in a great number of obscure diseases in which the luetic foundation would have remained undiscovered without this diagnostic aid.

PRELIMINARY PROGRAM OF THE THIRTY-EIGHTH
ANNUAL MEETING OF THE AMERICAN
DERMATOLOGICAL ASSOCIATION.

Chicago, May 14, 15 and 16, 1914.

- BURNS, FREDERICK S. A Case of Unusual Congenital Keratoderma.
CORLETT, WILLIAM T. Xeroderma Pigmentosum, Attributed to Excessive Sun Exposure.
ENGSMAN, MARTIN F., AND DAVIS, ROBERT H. Observations upon the Cellular Elements of the Blood in Certain Diseases of the Skin.
GILCHRIST, T. CASPER. Double Comedones.
GOTTHEIL, WILLIAM S. The First Stage of Atrophia Maculosa Cutis, Appearing Clinically as Multiple Tumors Resembling Mycosis Fungoides.
HARTZELL, MILTON B. Report of a Case of Colloid Degeneration of the Skin.
HAZEN, HENRY H. Personal Observations on 2,000 Cases of Skin Diseases in the Negro.
KNOWLES, FRANK C. Urticaria Pigmentosa, Particularly in Regard to Its Pathology.
MACKEE, GEORGE M. A Case of Purpura Annularis Telangiectodes (Majocchi). Clinical and Histological Reports with Review of the Literature.
MORROW, HOWARD. Paronychia; Etiology and Treatment.
MONTGOMERY, DOUGLASS W., AND CULVER, GEORGE D. An instance of Asymmetrical Raynaud's Disease.
PUSEY, WILLIAM A., AND STILLIANS, A. W. Practical Experience with the Luetin Test.
RAVOGLI, A. W. Lupus Erythematosus Diffusus Treated with Tuberculin, with Injurious Effect.
SCHAMBERG, JAY F. Psoriasis (paper to be read in three parts).
TOWLE, HARVEY P. Local Vaccine Applications.
VARNEY, HENRY R. The Sero-Enzyme Test for Syphilis Controlled by Clinical and Serological Findings.
WHITE, CHARLES J. The Use of Calcium Lactate in the Treatment of Certain Dermatoses.
WILE, UDO J. A Study of the Spinal Fluid with Reference to the Early Involvement of the Nervous System in Secondary Syphilis.

BOOK REVIEW.

DIET AND HYGIENE IN DISEASES OF THE SKIN. By L. DUNCAN BULKLEY, A.M., M.D. Physician to the New York Skin and Cancer Hospital; Consulting Physician to the New York Hospital; Consulting Dermatologist to Randall's Island Hospital, to the Hospital for Ruptured and Crippled, and to the Manhattan Eye and Ear Hospital, Etc. New York. Paul B. Hoeber. \$2.00 net.

This little book (194 pages) is a crystallization of the well-known theories that Dr. Bulkley has promulgated for so many years.

The volume is divided into six lectures, each dealing with some skin disease that is more or less influenced by errors in diet or hygiene.

The appendix is devoted to the consideration of special diets, etc. The work will be of undoubted value to any one who wishes to carry out a certain line of diet in the treatment of those refractory skin diseases that are especially dealt with in the book.

The binding, presswork and general make-up of the work is excellent.

J. M. W.

THE JOURNAL OF CUTANEOUS DISEASES

VOL. XXXII

JUNE, 1914

NO. 6

THIRTY-EIGHTH ANNUAL MEETING OF THE AMERICAN DERMATOLOGICAL ASSOCIATION.

(Chicago, May 14th, 15th and 16th, 1914.)

PRESIDENTIAL ADDRESS

By JAMES MACFARLANE WINFIELD, M.D., Brooklyn.

Professor of Diseases of the Skin, Long Island College Hospital.

FELLOW MEMBERS OF THE AMERICAN DERMATOLOGICAL ASSOCIATION. It is a difficult task for me to express in cold words my deep appreciation of the honor you have conferred upon me in choosing me to preside over this distinguished body of men, who constitute one of the oldest and greatest National Associations of Dermatologists.

I assure you I do most sincerely appreciate the honor you have done me, and the confidence you have placed in me, and I have given earnest thought and effort to plans for making this year's administration a success; and I ask you for your aid and coöperation in the conduct of this meeting.

Before attempting to prepare the customary and expected address, I took occasion to read those of my distinguished predecessors, and I found that it was time well spent, for each address marked time in the rise of American dermatology and this Association.

I have taken the liberty of departing from the custom of delivering a purely academic, historical or scientific dissertation, and will simply submit for your consideration some matters that might tend to benefit and advance American dermatology and our Association.

American dermatology can be said to have had its beginning with the organization of the New York Dermatological Society in 1868, and the American Dermatological Association in 1876.

The American Dermatological Association is the reflection of the status of dermatology in America, because here is brought the statement of our latest achievements, and this is the forum before which present day questions are decided and plans for the future are perfected.

The founders of this Association, the pioneers of American dermatology, inspired the medical schools to institute better cutaneous instruction, and gradually dermatology has come into its own, and is being recognized among medical men as one of the most scientific, difficult and important of the medical specialties; but in spite of this, even now, there are comparatively but few schools that teach the subject properly.

Twenty-five years ago, if one wanted to get the necessary clinical experience in dermatology it was almost imperative for him to go to Europe; now this is not necessary, for the clinical material in America, especially in the large cities, is equal to that which can be found in any city of the Old World.

The impression still held by many that dermatology is but the illegitimate partner of genito-urinary surgery was acquired by the fact that formerly the dermatological teaching was conducted by men who made genito-urinary diseases a specialty and diseases of the skin a side issue; it is further strengthened because the remuneration from dermatology alone is, often, not great enough to enable one to specialize in these diseases only.

A man cannot serve two masters, especially when one is as exacting as is the science of dermatology; either dermatology or genito-urinary surgery is enough to absorb all a man's intellect and ability; an attempt to combine the two has prevented many men from developing into brilliant dermatologists.

It would seem that the time has come when we, the leaders of dermatological thought and teaching, should make a united effort to improve and unify the teaching of diseases of the skin.

It is difficult to add to the present crowded curriculum too exhaustive a training in any of the specialties; it seems the most that can be done is to begin the foundation during the medical course: in dermatology, the junior student should be thoroughly trained in cutaneous histology, pathology and bacteriology, but this training should not be given by the general pathologist, but by one especially expert in cutaneous pathology, and he should be a member of the department of cutaneous medicine and surgery.

In the junior year should, also, be given the didactic teaching, leaving the senior year free for the clinical instruction; and if the

fifth year is added to the medical course, the post-graduate hospital year, the young doctor can then ascertain the specialty for which he is best fitted, but the foundation should have been sure and deep; and before the student reaches this fifth year he should have had sufficient didactic training, together with proper laboratory and clinical instruction, to enable him to choose his specialty with certainty.

It should be our endeavor to do everything possible to correct the custom that still prevails in many of our medical schools, of having syphilis a part of the Department of Genito-Urinary Diseases; it seems absurd for this general disease to be taught by men whose training and desires are mainly surgical, simply because in the majority of instances, the initial leuetic lesion is about the genitals. Granting that syphilis is a constitutional, systemic disease, the cutaneous specialist is the one who is trained to recognize its varied manifestations; is it not logical that he would also be better able to teach it than any one else?

We may look still farther beyond and begin to advocate, now, the establishment of a special department of syphilology in all of our medical schools and hospitals, where the whole subject can be systematically taught and treated by specially trained men.

I would suggest that a Committee of this Association be created to take the matter of dermatological teaching under consideration.

It should be the aim of all dermatologists, especially the younger men who are to follow us, to be so trained in the diagnosis of the exanthemata that their opinion would be of value when they are called in consultation; the trained eye of the cutaneous expert should be augmented by practical clinical experience in the cutaneous manifestations of the so-called "children's diseases."

To make the study of dermatology more attractive to the beginner it would seem that we might boldly enter upon the domain of surgery and rightfully claim our own, cutaneous surgery, or, if you please, cosmetic surgery: you all will agree that the cutaneous specialist should be able to, and does, get better cosmetic results than the general surgeon when the surgical repair is purely cutaneous; witness the beautiful and lasting results obtained by the use of radium, X-ray, refrigeration and dermatological surgery in the treatment of skin cancer and cutaneous blemishes.

Does it not seem that it should be the duty of every one practising dermatology to perfect himself, as far as possible, in these measures, and more especially in the surgery of the skin?

Dermatology has made its greatest progress along the lines of

clinical, bacteriological and pathological diagnosis, but in spite of its great achievements, our medical brothers claim that our therapeutic skill is sadly wanting; this criticism is, perhaps, justified; have we given the treatment and cure of skin diseases as much attention as we should? To gain the confidence of the general practitioner, and to place our specialty on a still higher plane, might it not be wise to pay more attention to cutaneous therapeutics?

These are a few hints and suggestions pertaining to American dermatology in general; now with your permission, I would like to speak of certain things concerning our Association.

One is filled with admiration when he realizes that the founders of this Association had the temerity to organize a national body for the study of skin disease when there was barely a handful of dermatologists in America.

When our Association became an accomplished fact, other nations followed our example and founded national dermatological organizations.

Nations can always learn from one another, and wise are the people who adapt and incorporate the wisdom and experience of another country into the customs and achievements of their own.

Our country has the greatest opportunity to stand in the forefront of scientific attainment of any nation since the birth of nations, for we are not hampered by the restrictions of government or effete traditions, and are heirs of the wisdom and accomplishments of the elder peoples; also we possess, as our own national characteristics, German erudition and solid foundation building; Latin adaptability and facility; Anglo-Saxon conciseness and assurance, and Semitic clear vision and devotion to an idea; when all these qualities, at their best, are welded together we shall have the greatest people, capable of the highest scientific and intellectual attainment possible to mankind; and looking forward to the realization of this great possibility, is it not time for the American Dermatological Association to be a national association in fact as well as in name, and take its proper place in promulgating and instituting medical progress along our special lines?

To accomplish this, the first step would be to remove the limit to membership, and instead of a national association of seventy-five or a hundred members, allow membership to be unlimited, accessible to all who are eligible; eligibility for membership should be as follows:

First, Five years' actual experience in the practise of dermatology.

Second, Practise limited to diseases of the skin and syphilis.

Third, A dermatological reputation acquired by the writing and publication of articles upon diseases of the skin and syphilis.

Fourth, When a candidate is proposed, he should present a thesis upon some dermatological subject, which should be submitted anonymously to a Board of Censors who should pass upon its scientific merit alone. There are a number of dermatologists throughout the United States who are, or soon will be, eligible for membership judged by this standard.

Therefore, I would suggest an amendment to the by-laws covering this point.

Along this line permit me to suggest another amendment to the by-laws, namely, increase of the list of honorary members.

Many of the founders of our Association have gone beyond, others have grown weary with years and are unable to take an active part in our proceedings; would it not be a graceful recognition of what they have achieved for the uplift of our chosen specialty, to make room on our honor list for those who are still with us?

We cannot consider national medicine without being at once confronted by three pertinent questions, which we, as a body, are better fitted to intelligently discuss than any other class of physicians: these are, eugenics, the social evil and the care of the leper.

Our professional experience would make our advice of unquestioned value to the agitators of the subject of eugenics.

The more physicians and criminologists delve into the mysteries of disease and crime, the more clearly the truth is revealed that the mental, moral and physical defective is often the direct outcome of what is popularly called "the social evil."

An honored and beloved member of our association carried the illuminating torch of fearless truth and common sense into the darkness surrounding this question; social prophylaxis and the control of sexual disease has left the sane, well-thought-out course prescribed by Dr. Morrow, and is being guided by enthusiastic reformers. The enthusiast usually needs the balance of the trained, careful, scientific man; unfortunately, many of those who are now trying to solve the problem are men who have had no experience in the care, treatment or management of the evil they are trying to regulate.

Could we not, as a body, help to mould public and medical opinion so that in the near future there may be an international law which will safely and sanely curtail and control this "pestilence that walketh in darkness?"

Owing to the influx of people from those countries where leprosy is prevalent, we are beginning to have an increasing number of lepers

in the United States; and the care of these unfortunates should engage the earnest attention of every American dermatologist, and we of the National Association, representatives of the dermatological world, should take the initiative in providing adequate measures for relief and restriction.

The way the unfortunate victims of this disease are treated by the different states of the Union is a disgrace to American civilization and a parody on American love of fair play.

In one state there is no law regarding leprosy, and the leper is permitted to go about in the community without restriction, while, perhaps in the state adjoining, the law is so rigid that he is a pariah and his life is made wretched; the result is that these lepers all try to get to the place where there is no law against them, where they eventually become a burden to the taxpayer, not to say a menace to the health of those with whom they come in contact.

It would seem that this association should join hands with other medical bodies in urging upon the United States Government the necessity of a national law and the establishment of a national home or homes for lepers.

I would, therefore, suggest that a committee of this Association be created, to draft a memorial, to be presented to the President of the United States, the Senate and the House of Representatives, setting forth the danger of the leper at large, and urging the need of his detention in a place under National control where he could receive the proper care; and scientific investigations could be carried on with a view to the relief of the unfortunate himself, the prevention of the further spread of the disease and the eventual eradication of it from the world.

On the title page of each number of the *Journal of Cutaneous Diseases*, appears the legend, "Owned by and Published Under the Auspices of the American Dermatological Association." Legally speaking, the first part of this statement is not correct, for an unincorporated body cannot own property. When we took formal possession of THE JOURNAL, as an expedient, our President appointed the Physicians' Publishing Company, an incorporated company, to act as trustees for the Association.

It is very probable that when this Association was organized there was no thought that it would ever be necessary to incorporate, but now, since the Association is the owner of THE JOURNAL and to make each member feel his right of possession, would it not be wisdom for us to incorporate; if we do, the Physicians' Publishing Company could dissolve and a publication committee could be created, to look

after the affairs of *THE JOURNAL*; this would widen the interest in this publication, and also simplify the business matters.

Therefore, I would suggest that in the very near future the proper steps be taken to incorporate the *AMERICAN DERMATOLOGICAL ASSOCIATION*, for I most earnestly hope that everything will be done to make it possible for *THE JOURNAL* to remain our property; and I feel safe in predicting, that under careful and right management, it will soon become self-supporting, and that every member of the Association can receive a free copy. If each of us will make it his duty to do missionary work for *THE JOURNAL*, there is no doubt that this prediction will soon come true.

Officially, I wish to express the Association's gratitude to the Editors, for the success of *THE JOURNAL* under their editorship.

The great improvement in the quantity of the subject matter, the interest and value of the added departments and the high quality of the entire publication is a matter for pride and congratulation.

These, gentlemen, are the few thoughts that have come to me, some of which have been expressed before by my predecessors. If you find my suggestions worthy of your consideration and attention, I shall feel both honored and complimented.

WHY WE DEFERRED GENERAL TREATMENT OF SYPHILIS UNTIL THE APPEARANCE OF SECONDARY SYMPTOMS.

By HERMANN G. KLOTZ, M.D., New York.

DURING the latter part of the last century a large number of physicians, probably a good majority of those who had made syphilis the particular subject of their study and observation, had adopted as a principle for their practice, with certain well-defined exceptions, to defer the initiation of the general treatment until the appearance of secondary manifestations. This practice was recommended in many hand and text books until quite recently, although there had always been some opposition to the doctrine. Toward the end of the century the attacks upon it had become more frequent and more persistent, not so much because it could be claimed that the results of treatment under such conditions were unfavorable, but mostly rather on the strength of theoretical

reasoning that syphilis, as an infectious disease, must be treated as soon as the infection has been recognized. This postulate certainly seems sufficiently obvious, but perhaps the question, whether it really may be indiscriminately applied to all the different classes of infectious agencies, may still be considered an open one, as it is known that some organisms can be attacked more successfully during certain periods of their life history.

Since the discovery of the *Spirochæta pallida* and its recognition as the infecting agent of syphilis, the attacks have become still more numerous and violent, at times going very near the limits of professional courtesy. This has been done without recognizing or considering the reasons which really had led to the adoption of the principle, but rather imputing motives that played but a secondary part, if any, in the formation of the doctrine. Some writers have assigned as the principal reason of the delay the uncertainty of the diagnosis and the incidental danger of leaving the patient in doubt whether he really had been infected (Gottheil among others). In a certain number of cases this probably was true, but in most instances the initial lesion of syphilis is sufficiently characteristic at an early stage to allow of a sure diagnosis, and even at the present time, where spirochætæ cannot be demonstrated, the clinical picture must be accepted as decisive. Incidentally, the deferring of treatment may have served the good purpose of convincing a doubting patient and inducing him to more readily and conscientiously submit to the treatment. Nor was the alleged superstition a common one that early treatment would favor the development of affections of the nervous system (Fordyce), except in so far, as treatment early begun would often be early abandoned, for insufficiently continued treatment rather was looked upon as favoring the development of the nerve troubles. In reality, the doctrine was based on the close observation of the clinical course of syphilis. There existed ample opportunity at that time to watch syphilis when, uninfluenced by treatment, it was abandoned to its natural course. It became apparent that the earliest general manifestations, coming more or less uniformly within a certain time, disappeared spontaneously, and after an interval were succeeded by another set, which in its time might give place to a third and so on, the number of successive outbreaks varying in different cases and commonly being in proportion to the intensity of the action of the virus. Thus, syphilis usually showed itself not in a continuous but in an interrupted succession of lesions. The observation of the effect of the general treatment on this natural course of the disease strongly pointed to the fact that those cases

ultimately did best in which specific treatment had been deferred until the secondary stage, that under this condition the quasi normal course of events was least disturbed, that subsequent outbreaks ceased or were of a milder character and that late symptoms were more rarely observed. While it soon became apparent that early treatment did not prevent the eventual appearance of secondary symptoms, they did not come at the usual time and in the usual form, but later on, irregular and more aggravated manifestations would appear, relapses occurred more frequently and showed greater resistance to the usual means of treatment, and tertiary symptoms were not unusual. It seemed that the infectious agent of the disease, of whatever nature, was subject to periodical phases of greater activity and tendency to invade wider areas, and that during these periods it was more amenable to the treatment. Naturally, with the increasing knowledge of parasitic organisms in general, it had become sufficiently clear that we must have to do with some such organism in syphilis, and as early as 1893 it was pointed out (*Jour. Cut. and Gen.-Urin. Dis.*, xi, pp. 279 and 300) that the causative agent of syphilis could not be of a character similar to the tubercle bacillus but must be related to the organisms that cause the acute exanthemata. Viewed from the bacteriological standpoint, the fact that a more or less general invasion of the body takes place within a certain limited time after the infection, regardless of the character, extent and seat of the primary focus and of the age, sex, race and condition of the patient, as well as the tendency to successive outbreaks, strongly suggests some peculiar and important influence of the organism.

Toward the end of the last century the chronic intermittent treatment had been introduced with the avowed purpose of eliminating the periodical outbreaks, and had found favor with many physicians in preference to the symptomatic treatment. Under its influence the original feature of the periodical outbreaks had become more and more obscured and almost vanished from the picture of the disease, so that the course of the infection appeared rather as a continuous performance. This may explain why, after the discovery of the *Spirochata pallida*, little or no attention has been paid to the periodical character of syphilis, and conclusions have been drawn without any exact knowledge or reference to the life history of the spirochata itself, although one can hardly pretend that the discovery of the infectious agent alone could have changed the clinical character of the disease itself. Still, the fact that a general invasion of the body takes place within a certain time after the infec-

tion in every case, irresistibly points to some phase in the life history of the spirochæta which so far has not been satisfactorily demonstrated. The belief that the infectious organism could be more effectually attacked and rendered innocuous or be destroyed by the application of specific treatment at the very time when they were swarming and spreading out over the various organs and portions of the body, before they had occupied the tissues long enough to permit the performance of local destructive processes or the construction of strong defenses, can hardly be called illogical or unreasonable, even in the light of recent discoveries, the less so since the more practical experience had confirmed its correctness. The insistence of numerous writers upon the importance of the strongest possible treatment at this stage contributes to demonstrate that the much-maligned doctrine stood on a very good scientific basis.

At the present time, the claim that a sufficiently early treatment by salvarsan alone or in combination with mercury may abort the infection and effect a definite and permanent cure within a few months, must not be disputed any longer, although it is constantly being pointed out by experienced and unprejudiced men that not sufficient time has elapsed to make such a claim absolutely incontestable. Nor can one entirely ignore the fact that even formerly some patients who were undoubtedly affected with syphilis, without being subjected to any specific therapeutic measures at all or to efficient ones, remained well and free from any distinct or suspicious symptoms for life, or for periods of ten years and longer, only to develop tertiary manifestations afterward. Similar occurrences were observed in others who had received more or less extensive and energetic treatment after the appearance of a macular or maculo-papular syphilide, at the normal end of the second incubation period. If the positive Wassermann reaction has to be considered a symptom of syphilis, we have absolutely no assurance that a negative reaction may become positive again after the lapse of years.

However, admitting all that is claimed for the early abortive treatment by salvarsan, we meet with quite different conditions with regard to its influence during the secondary period. Unfortunately, the literature on salvarsan presents such varied and often contradictory opinions and reports of such different experience, that one may read out of it almost anything that suits one's bent of mind; still, the fact that during the so-called secondary stage of the disease the effects of salvarsan are by no means as favorable as during the primary stage, can hardly be doubted when numerous unprejudiced observers and Ehrlich himself strongly endorse the combina-

tion of mercury with salvarsan. While some lesions, particularly those of the mucous membranes, are usually much more rapidly cured by salvarsan, others, like some papular syphilides, intense induration of the primary sore and swollen lymph nodes, are often very little or not at all affected. Of not less importance is the fact that very soon after the introduction of salvarsan, there began to come reports of early, frequent and sometimes very refractory relapses, of the so-called neuro-recidives and other irregular, at times quite alarming conditions which formerly had been not at all or but rarely observed. Such occurrences have been explained as due to insufficient salvarsan treatment, but that simply means that the conditions were of a severe and unusually resistant character. These experiences strongly remind one of conditions which we met with, although probably in a less aggravated manner, in those patients who had been treated before the secondary stage—the very conditions which, to avoid, deferred treatment had been recommended. Now, unfortunately, not all patients come under observation during the earliest stages; indeed, their number is probably a comparatively small one. Many more are first seen when the Wassermann reaction is already positive, with a variously developed induration at the seat of the primary sore, with an indolent swelling of the neighboring lymph nodes and possibly of some cervical glands, while others show already well-defined eruptions of the skin and of the mucous membranes. It is hardly claimed that under such conditions a really abortive effect of treatment could still be obtained. Therefore it is difficult to understand, at least considering the first of these groups, why the plan of delaying the general treatment until the actual appearance of some secondary symptoms, should be so utterly condemnable or perhaps even criminal. Under no circumstances could any great harm come to the patient, as the delay would not amount to more than a few weeks at the utmost, while ample testimony is extant, easily accessible to anybody who is willing to look at it, that in thousands of cases this procedure furnished not only not inferior, but really more satisfactory results. Indeed, it would be defensible and even advisable, as long as we have not any exact knowledge of the life history of the spirochæta, to purposely allow a number of cases to proceed without treatment until secondary symptoms do appear, before beginning the application of salvarsan alone, or in combination with mercury, and see what results would be obtained. It would not require a very large number, but careful and minute observation, rather than thousands of cases which necessarily can hardly afford more than a supervision. The delayed cases should be watched

for a number of years for the character and duration of the early symptoms, for the frequency and rapidity of appearance of later outbreaks, particularly for neuro-recidives, for the occurrence of tertiary manifestations, of tabes and paresis, if possible in comparison with an equal number of cases in which treatment was commenced before the secondary symptoms, but after the appearance of a positive Wassermann reaction.

Accepting the combination of salvarsan and mercury as the preferable treatment for the early and later secondary stages, one must abandon any attempt of separately defining the value of either of the constituents. But one may well call attention to the undisputed fact that, under mercurial treatment, during the long era of its prevalence, innumerable patients have been cured, or, as I would rather put it, have been aided to get rid of their syphilis. How great the percentage of cures might be, would largely depend upon the method of the application of the mercury and to a certain extent upon the social conditions of the patients. In the absence and the impossibility of any fairly accurate statistics, even at the present time, one man is just as much entitled to a claim of 75 to 80 per cent. of cures, that, is freedom from all symptoms of syphilis and its sequelæ during lifetime, than the other one who allows only a minority of cures (Fordyce).

The *Spirochæta pallida* has been demonstrated in the tissues of all kinds of syphilitic manifestations in greatly varying numbers; the question how, in which form, when and wherefrom they reach there is not definitely decided in the absence of satisfactory demonstration of their life history. We are told that within a few weeks after infection, the spirochætæ spread throughout the lymphatics into the circulation and throughout the entire system.¹ If the spreading of the spirochætæ were by contiguity alone, it would be singular not only that it takes such a long time before they reach the circulation, with blood vessels everywhere abundant within a short distance of the place of entry, but also that the time which elapses between the appearance of the primary sore and of the secondary symptoms should be so nearly uniform in all cases, regardless of differences among the patients themselves and the forms of development of the primary focus. These conditions all speak in favor of some peculiar character or phase of the spirochætæ themselves, which so far has not been demonstrated, but probably is the subject of investigations; and until some definite explanation of these phenomena has been obtained,

¹ POLLITZER. *Post-Graduate*, 1913, xxviii, p. 729.

it might be preferable to abstain, for the time being, from setting up theories as indisputable facts.

Whoever has observed, in numerous cases, the development of secondary outbreaks without any therapeutical interference, will surely have become impressed with the fact that they show great differences in the intensity and distribution, that even in a single organ like the skin, the limits of the distribution may vary very much. Under such circumstances, one may doubt whether such an outbreak really does extend to every organ in every case, the more so, as subsequent periodical outbreaks may be much more severe in character and of wider extent than the first one. Particular emphasis has been laid upon the early general distribution of the spirochætæ with regard to the affections of the nervous system, and primarily, with tabes and paresis. If really every syphilitic is subject to such an early invasion of the nervous centres, it is difficult to realize that only a very small percentage of syphilitics develops paresis and tabes. It has also been described as a matter of but recently acquired knowledge that in the very first months of the disease the spirochætæ invade practically every tissue of the body. It has long been known that not only the skin and the mucous membranes, but also the nerves, the eye, the osseous system, the kidneys, the liver and other parts of the body may early become the seat of syphilitic manifestations. But to absolutely prove that in every case practically every tissue becomes the seat of spirochætæ would require a very careful and minute investigation of a considerable number of the bodies of individuals that died within a few months after their infection with syphilis. The opportunity for such autopsies is necessarily a very limited one, and if such examinations have really been made in a methodical way and by competent men, they certainly would have been published and widely reported and commented upon. For congenital syphilis, such proof has indeed been furnished, but there the conditions are so different from acquired syphilis, that the findings in cases of the former cannot be immediately applied to the acquired cases. It has been stated¹ that among Noguchi's findings of spirochætæ in the brains of paretics, the great majority were made in comparatively rapid cases of the disease, that is, in those of short duration. If further studies would show that the spirochætæ were few or absent from the brain in prolonged cases, that would be a corroboration of the view that the nervous system is not a favorable soil for bacterial growth, that organisms that invade nervous tissue do not thrive there, and

¹ POLLITZER. *Med Rec.*, May 3, 1913, lxxxiii, p. 797.

however much damage they may do, soon die out. Now, one must remember that tabes and paresis usually develop rather late after infection—rarely before ten years—but as late as after twenty and more years. Assuming that the spirochætæ, as claimed, are reaching the brain within a few months after infection, they must do all damage at an early stage, that is, before they die out, because they cannot do any damage after their death. So one might well expect that the damage would become apparent at an earlier date than after ten or more years. Nor can they produce any new crops after they have died out, and if numerous spirochætæ are present in rapidly developing or more recent cases of paresis, they must have come from somewhere else and at a later date, and the connection of the disease with that early invasion becomes rather uncertain. A much more simple and reasonable explanation is furnished by the fundamental, innate tendency of the disease to the production of an interrupted succession of lesions, which will persist as long as the disease itself is not extinguished. It is true that we have so far no explanation of this feature, but that is not a sufficient reason for ignoring it and setting up theories on mere hypothesis. It would seem meritorious, rather, to study the spirochætæ more with reference to the clinical features of the disease which have been defined with keen power of observation, and certainly cannot have been changed by the discovery of the spirochætæ or by salvarsan.

THE KROMAYER LIGHT IN THE TREATMENT OF CERTAIN DISEASES OF THE SKIN.

By A. SCHUYLER CLARK, M.D., New York.

SINCE Kromayer¹ introduced his modification of the mercury lamp and suggested its use in the treatment of the skin and mucous membranes nearly 10 years ago, but little advantage apparently has been taken of this means of treatment in this country. On the other hand, numerous investigators have experimented with and written on the Kromayer light, and to-day in many of the clinics abroad it is considered a very important part of their dermatological armamentarium.

Kromayer advised its use in the treatment of furunculosis, sycosis, canceroid, nævus vasculosus, alopecia areata, eczema, acne,

rosacea and the two forms of lupus, and described its advantages over other then existent light sources, i.e.:

1. Shorter light exposure than with the Finsen Light.
2. Treatments of larger lesions than with the other lights.
3. The possibility of treating the mucous membranes in the various cavities of the body.
4. The greater ease of application both from the patient's and doctor's point of view.
5. The comparative cheapness of the lamp and the lessened cost of operation.
6. At least equal therapeutic effects from his lamp as compared with other light-producing mechanisms.

Gunni Busck² of the Finsen Clinic, shortly after declared from his observations that the Finsen light was stronger and was followed by less inflammation and necrosis, and it was after this that observers began to use methylene blue in the water-cooling solution and were, therefore, able to give stronger and longer applications without so much burning of the skin.

Schultz,³ a little later, made some observations on rabbits' ears exposed to both the Kromayer and Finsen lights, and concluded that the latter had a greater penetration with a less superficial and inflammatory action. He does not, however, state whether these exposures were made with or without the blue filter-cooling solution, nor how firm a pressure was used in his experiments.

Stern and Hesse⁴ experimented with the quartz light pathologically and clinically, in 1907, and recommended it as a useful agent in the treatment of certain skin diseases, but did not consider it as effective or as penetrating in the treatment of lupus vulgaris as the Finsen light.

Heyman,⁵ shortly after, in 1907, pictures a case of lupus vulgaris healed, and strongly recommends the use of the light in *nævus vasculosus*, *eczema*, *acne*, *ulcus*, etc., in all of which conditions he reports its use with good results.

Pürckhauer,⁶ in a very careful and exhaustive article on "The Penetrative Power of the Kromayer Light from a Clinical and Pathological Point of View, both Macroscopically and Microscopically," has compared the effects with a clear water-cooling solution and with a methylene blue water-cooling solution and determined that with the former method, after any considerable exposure, a necrosis resulted in the superficial layers of the skin with a consequent scar

formation after the healing, whereas an even longer exposure after the latter method produced a degeneration and absorption, followed by a slow regeneration of tissue, and consequently little or no scarring. Compared with the Finsen light, he then concludes that "certainly the Kromayer light is not at a disadvantage as to penetrative power and cosmetic effect." The inflammatory reaction seemed to be some hours later in appearing after Kromayer light exposures, while the duration of the regenerative process seemed to take longer. He speaks of a thrombosis of the blood vessels even in the deeper layers of the cutis following some of these exposures.

Lohde⁷ used the light with considerable success in lupus, *nævus vasculosus* and *eczema* and declared, after considerable experience with it, that his other remaining light apparatus had now only historical worth.

Ledermann⁸ experimented with the light clinically in the Fall of 1907 and, while he acknowledged the bactericidal effect and claimed good results in the treatment of *alopecia areata*, he was not at all satisfied with the treatment in lupus cases. He thought, however, that longer exposures might give better results and from the cases reported, he was, I should think, under-exposing his patients.

Schmidt,⁹ in 1908, reports three cases of *lupus vulgaris* healed, with good cosmetic results. In one of these cases comparative treatments were made with the Finsen light and it was his opinion that the quartz lamp could come in question as a substitute for the Finsen apparatus.

Schucht,¹⁰ in 1908, reported in detail *lupus vulgaris* and *lupus erythematosus* cases healed with good cosmetic results and also commented on his good results in *nævus* and *rosacea*. He declared that the lamp could be relied on as a certain healing means in *lupus vulgaris* and *lupus erythematosus*.

Nogier¹¹ demonstrated that an exposure of 10 minutes was sufficient to sterilize completely a culture of *staphylococci* on agar in a petri dish; that vegetable matter exposed to the rays was promptly affected, but that the water circulating in the lamp had no effect on animal or vegetable matter.

Bordier and Nogier¹² made, in 1908, experiments with the light, demonstrating the absorptive power of the blood for it, thus explaining the reason why firm pressure is necessary in order to get any degree of penetration. The spectrum shows a pretty sudden reduction of oxy- to meth-hæmoglobin. He speaks of the rather pronounced way any eruption illuminated by this light stands out, a matter which I have also observed, the slightest lesion of a lupus

tubercle showing most pronouncedly under the rays. He considered the light as sure and effective and acting more quickly than the Finsen.

Hesse¹³ made some experiments by exposing the human skin through a rabbit's shaven and scrubbed ear, both with the quartz light and the Finsen light, and concluded that even with the methylene blue cooling solution, 1-10,000, the Kromayer light was certainly no more penetrating than the Finsen, the human skin not having been affected in either case after 35 minute exposures, and that there was a more pronounced superficial inflammation after the Kromayer light experiment. The question may arise here, "Was his blue solution strong enough to filter out most of the superficial burning rays?"

Wichmann¹⁴ made similar experiments, but probably used firmer pressure and a more concentrated blue solution with longer exposures, for he produced a typical radio-dermatitis on the human skin with the Kromayer rays through a rabbit's ear and this inflammation was more pronounced than after similar Finsen light exposures.

Joachim¹⁵ pictures and describes several cases of alopecia areata successfully treated with the ultra-violet rays and recommends their use in this condition.

Reines¹⁶ adds to the usual list of dermatological diseases in which the light is indicated—pityriasis versicolor and seborrhœa. In lupus erythematosus he was enthusiastic about his results, but questioned whether lupus vulgaris ever really was cured in this way, though acknowledging that his cases regularly improved.

Nogier,¹⁷ in 1910, again experimented on the bactericidal qualities of the Kromayer rays and demonstrated that considerable quantities of water could be completely sterilized with a comparatively short exposure, even the colon bacillus being destroyed, and suggested it commercially for this purpose. On page 174, in an article entitled "The Artificial Production of Actinic Rays," he gives the Kromayer light the place of honor as a source of these rays as compared with other light sources, mentioning the practical therapeutic advantages of being able to filter out the red, yellow and green rays through the blue screen that had then come into use, the advantages of a cooled lamp that could be pressed firmly against the tissues, thus increasing its penetrative power, and mentioning the usual list of skin conditions in which he had seen it used with effect in Kromayer's Clinic.

Poor¹⁸ healed 10 out of 32 cases of lupus vulgaris, 16 others were improved; in 6 of his cases he could not get much in the way of

results. The resulting scar he described as an ideal, smooth, atrophic one. From his experience he recommended the Kromayer light in all conditions where ultra-violet rays were indicated, and compared it favorably with the Finsen light as to therapeutic results.

Rave¹⁹ details 12 cases of eczema healed with Kromayer light and, while he found it effectual in the chronic infiltrated cases and also in the pustular eczemas, it was in his opinion most effective in the treatment of the stubborn recurring vesicular eczemas.

Kromayer,²⁰ as a result of 40 cases of vascular naevi treated by his light or radium, or a combination of both, concluded that the indications for treating these conditions were as follows:

The superficial red or blue-red (due to capillary widening) naevi, with little arterial involvement, are suitable for his light and his cases showed most excellent results. The red arterial naevi were better handled with radium, he thought. Certain cases of mixed naevi were successfully treated both with the Kromayer light and radium.

Schattmann,²¹ after considerable experience in Ledermann's Clinic in Berlin, demonstrated the usefulness of the Kromayer light in alopecia areata, rosacea, vitiligo and lupus erythematosus. Lupus erythematosus cases were regularly improved under him, but showed a tendency to relapse. He preferred the Finsen treatment in this class of case unless the lesion was very superficial.

In the discussion before the Commission on Lupus in Berlin in 1910, Klingmüller was a strong advocate for the use of the Kromayer light in lupus vulgaris, but Nagelschmidt, Neisser, Blaschko, Lesser and others seem not to have considered it seriously.

The last word I have on this subject is from Blaschko²² in an article in English in which he says, "The most complete lamp for treatment purposes at the present time is the quartz lamp, made after Kromayer's plan." "The rays from this lamp," he says, "act as an irritant to the outermost layers of the skin; later a marked dilatation of blood vessels in the deeper layers with hæmorrhages from them is noticed, followed by an absorption of any destroyed cells from the blood stream and the repairing of superficial tissues by increased cell division. Its rays are extraordinarily bactericidal, reducing the bacteria content of the skin to one-tenth; they are anti-pruriginous and reduce nerve irritation, and where much used, there has developed a stimulating effect on the entire organism. The lamp may be employed at a distance of 10 to 20 centimetres, or if one desires to produce a deep influence as in lupus, then one presses the lamp firmly upon the skin to force out the blood from the more superficial layers." He advises sharply localizing the rays on the diseased areas, as the normal skin is more susceptible to its effects than the

diseased, owing to the lack of congestion found on the former. He maintains that lupus vulgaris can be treated equally successfully with either the Finsen light or the Kromayer light, but advises excision in certain cases. Ulcerating and hypertrophic lupus, according to him, would seem to require at least a preliminary treatment with the X-ray. In tuberculosis verrucosa cutis the mercury lamp may be profitably employed and in lupus erythematosus it acts in a very striking fashion. In the latter, he apparently uses the distant rays and exposures prolonged enough to form blisters. For its bactericidal effects he indicates it in the impetigos, folliculitis barbæ, folliculitis decalvans and acne vulgaris.

In general furunculosis, by a raying of the surrounding tissues as well as the lesions, rather than by bathing, you can diminish the bacteria count of the skin as well as influence the furuncle. The eczemas, according to Blaschko, seem to form the widest and most favorable field for this method of therapy. He also speaks of it in the treatment of alopecia areata and pruritus and claims good results even in the senile form, and in the chronic pruritus of the anus and vulva. He naturally warns against neglecting general and constitutional measures along with this form of treatment, as well as with any other local application.

Surgically, Garre of Bonn, Rehn of Frankfort and Vulpius of Heidelberg are most enthusiastic over their results in the treatment of tuberculous sinuses and tuberculous joints and glands, when combined with the open-air sunshine treatment.

The Kromayer light, then, has been recommended for its superficial effect in

Alopecia areata
 Psoriasis
 Pityriasis rosea
 Eczema
 Pruritus
 Acne
 Furunculosis
 Folliculitis simplex
 Folliculitis barbæ
 Folliculitis decalvans,

and by its deeper action in

Lupus vulgaris
 Lupus erythematosus
 Nevus vasculosus
 Nevus pigmentosus
 Telangiectases.

The ease of application of the lamp would seem to recommend it, it being only necessary to have access to a street current and a cold-water faucet. It is self-lighting and regularly in working order apparently, and can be placed in a standard and holder with only an eye as to the flowing water necessary, or held by a nurse, as seems most convenient. There have so far been no serious effects recorded to operator or patient. Looking into the light for even a short time will, however, produce some scleritis and one must always remember the possibility of being sunburned by even short exposures. Any kind of a large glass will protect the eye, kid or rubber gloves seem to protect the hand of the operator, and the patient can be easily protected by the photographer's black cloth used in focusing the camera or by thin layers of tin foil. The red, yellow and green rays can be easily filtered out by varying thicknesses of screens, thus allowing a prolonged and penetrating exposure without an undue amount of superficial inflammation.

The rays of the Kromayer light are quite analogous to the sun's rays on a high mountain and the dermatitis produced is quite like a sunburn of greater or less severity, which does not tend to produce scarring, but does result in a more or less browning or tanning of the skin. The ultra-violet rays are said to be germicidal, soothing and anti-pruritic, stimulating and constructive or caustic and destructive, depending upon the length of the exposure and the amount of rays emitted, and the action is, as has been said, superficial or deeper, depending upon whether the exposure is at a distance or the window is firmly pressed against the exposed part. The size of the dose can be easily regulated and is a fairly suitable quantity owing to the mechanical construction of the lamp. It depends directly upon the rheostat, the permeability of the quartz window, the distance of the source of light from the area exposed and, to some extent, on the susceptibility of the skin to light rays. A corresponding susceptibility to the sun's rays is regularly present and should be considered in our initial dose.

All of my applications, with a few exceptions at the start, have been made through the blue quartz filter and all of the diseases treated, except the cases of eczema, psoriasis, alopecia areata and pruritus, have been done by the pressure method. The little scarring and the regularly good results I have obtained in my cases, I believe to be due to the fact that I used almost the thickest blue filter and very prolonged exposures. My personal experience with the Kromayer light comprises the following cases:

CASE REPORTS.

CASE 1. NÆVUS VASCULOSUS. Mrs. A., of English extraction, 36 years old.

HISTORY. Since birth patient has had a port-wine nævus on the right side of the face, in large patches, broken here and there by sound tissue, occupying right temporal region, right maxillary region, extending well up on the lower lid to inner canthus of eye, right zygomatic region and side of neck and inferior maxillary region. For the past 15 or 20 years various means have been used on small areas, namely: caustics, high frequency spark, carbonic snow, electricity, etc., but these means were either without result or left unsightly, pitted scars.

Seven months ago I began exposing small areas of this nævus to the Kromayer light, using firm pressure with the quartz window and the blue quartz filter. Exposures varied from 30 to 35 minutes and were regularly followed in from 12 to 24 hours by an erythema, and later by a superficial blistering, and finally, a crust dropped off in from 10 to 14 days, leaving a dull redness which gradually disappeared with the obliteration of the nævus and a comparatively normal skin, without scars. In some instances it took a second application of the light to entirely obliterate the nævus. With the exception of scattered, tiny areas of color or minute, dilated vessels that were apparently not included in the numerous areas exposed, and rather disfiguring scars from the old treatments described, the patient presents a fairly normal appearance. Altogether, I should say that a total area of deep red, port-wine nævus, 3 inches by 6 inches, has been removed without a scar. Indeed, the patient insists that there is not only no scarring, but that old scars, which were necessarily included in the exposure, are now much flatter and less noticeable.

An interesting feature of the case was the appearance of the lesions 6 to 12 hours after exposure. The exposed area in each instance was distinctly darkened, and running through it was seen a network of fine, almost black, straight, curved and irregular lines, which were undoubtedly vessels in which the blood had been coagulated as a result of the exposure. In this way, I believe the nævus is obliterated, and that would explain the reason why it can be done without a resulting scar.

CASE 2. NÆVUS VASCULOSUS. G. L. Age, 6 years, American, female.

HISTORY. Since birth child has had a port-wine nævus below the right eye about the size of a quarter, deep red in color, and most conspicuous. After one exposure of 35 minutes, the lesion entirely disappeared without any scar, leaving only a pinpoint dilated vessel behind. The coagulation of the blood in the larger vessels of the nævus was here again distinctly noticeable.

CASE 3. NÆVUS VASCULOSUS. A. G. Female, 38 years of age.

HISTORY. Since birth patient had had a very pronounced port-wine nævus on the left side of nose, the size of a thumb nail and almost a solid patch, with a few scattered areas, the size of the palm of the hand on the right malar region extending down to right upper lip. At least three-fourths of this area, all that has so far been exposed, is cured without a semblance of a scar and mostly after one application.

CASE 4. LUPUS VULGARIS. J. K. C. Male, 53 years of age.

HISTORY. Patient has had a patch on left loin for 15 years. From time to time it has increased a little in size; has had some treatment with strong salves that never helped lesions much. When first seen, there was a lesion present a little larger than a silver dollar, dull red in color with little scabs scattered through it. Under these scabs were little depressions and along the edge were

typical lupus tubercles. The edge was not raised nor pearly. The lesions apparently entirely disappeared after one exposure of 30 minutes with the unfiltered rays, but there was a very marked reaction. Beginning on the second day at the site of the tubercles there were noticeable whitish, sloughing spots. Three months later the patient presented still some redness of the area exposed and a tubercle lesion in the centre of this area. This disappeared after a second exposure of 35 minutes, and the patient now, after 8 months, seems completely relieved of his trouble.

CASE 5. LUPUS VULGARIS. N. H. Female, 40 years of age.

HISTORY. Spot first appeared on left cheek 30 years ago. It was almost healed 25 years ago with caustics, but soon was as bad again as ever. It is worse now than at any time, after the cauterization and other treatments for the past six months. Immediately prior to that, the patient had undergone a prolonged treatment with the X-ray. When last seen only a small split-pea sized lesion, after 4 months remained; another exposure was then given.

CASE 6. LUPUS VULGARIS. C. L. Age 55, married.

HISTORY. The patient had had a lesion consisting of separate, typical, apple-jelly like tubercles in an area $\frac{1}{2}$ by 1 inch, that had been bothering her a little for a few weeks, situated over the right shoulder. The lesion disappeared entirely after one 45 minute exposure followed by considerable reaction. No scarring was left except the little pits where the tubercles had been.

CASE 7. LUPUS VULGARIS. S. D. Italian, 11 years of age, male.

HISTORY. Lesion began as a boil 9 years ago on the right cheek. It has never healed though he has had much treatment from time to time by curetting, caustics and snow. This patient has had hip disease for almost the same length of time and still wears a brace.

When first seen a typical lupus lesion presented along three-fourths of the circumference of a circle, the size of a silver dollar, with a marked scarred area in the centre and upper fourth of the circumference of this area, the result of former treatment. The lesion healed after two prolonged exposures except for a spot the size of a small finger nail, to which another application was given.

CASE 8. LUPUS VULGARIS. F. G. Italian boy, 11 years old.

HISTORY. The patient gives an indefinite history of some kind of a sore in the same place six years ago. Three years ago the disease began on the left cheek as a little spot and has gradually spread up to the present time.

When first seen the patient presented an exuberant, soft, succulent, scabby, bleeding lesion in front of and below the left ear, fully as large as the palm of the hand, with typical, apple-jelly like tubercles along the edge. It was as aggravated a condition as I have ever seen. Also, a patch on the left side of the chin with many tubercles, the size of a quarter, another patch on the left side of neck, size of a half dollar. After numerous prolonged exposures, averaging 3 to 4 to each area of the larger patch, there is a most marked improvement, the lesions being smooth, level, of a dull red color, and only scattered tubercles are now seen where this exuberant mass formerly existed. After two exposures the patch on the chin is apparently well with slight scarring from the lesion itself.

CASE 9. LUPUS ERYTHEMATOSUS. T. F. Male, 28 years old.

HISTORY. Patient has had patches of lupus erythematosus on nose and cheeks for two years. The nose is now practically free after treatment with snow with

some scarring, but a patch the size of a thumb nail still persists below the right eye, and a similar patch to the left of the ala of the nose on the left cheek. These patches were superficial with a silvery crusting and not inflammatory. In this case 10 to 20 minute exposures with unfiltered rays, though producing a moderate reaction, had only slight effect on the lesion. After two longer exposures with filtered rays the lesions seemed to have disappeared without scarring. Four months later, patient returned with several new patches on face and one along the edge of one of the areas recently healed.

CASE 10. LUPUS ERYTHEMATOSUS. J. R. Female, age 50, Scotch.

HISTORY. Patient has had a disseminated lupus erythematosus on face and forehead for 8 years. Some patches have been removed by CO₂ snow, and although the lesions were probably like the present ones, *superficial* in character, evident scars remain. The patient still had when first seen numerous superficial patches on the face and forehead and some newer and red ones on the right cheek. At first, 10 to 25 minute exposures were tried with no real effect until the 25 minute periods were reached. Lesions were then tried with 25 to 35 minute exposures, followed by marked erythema and superficial blistering, and regularly after two and sometimes after one exposure, they disappeared, leaving a dull red, smooth area behind, which gradually has returned to the normal appearance, no scarring resulting because of the superficial character of the lupus.

Some new patches have appeared and will be treated, but all the old ones, I believe, have now yielded.

CASE 11. LUPUS ERYTHEMATOSUS. W. P. Male, 28 years of age.

HISTORY. His trouble began as patches 10 to 12 years ago and five years ago, the lesion became a large, bat-winged eruption across the nose and extending laterally on the cheeks almost to the zygomatic region. Under the eyes the lesions were so severe that a very marked ectropion had resulted with a consequent conjunctivitis, and the patient altogether presented a pretty sorry and uncomfortable picture. The lesions were generally dry and fairly superficial and covered with silvery scales. There was considerable atrophy in spots and many telangiectases. After many treatments with the Kromayer light, this extensive lesion had apparently healed, except for small areas that, owing to the size of the lesion, had not yet been exposed or had only one exposure. The ectropion had almost disappeared as had the conjunctivitis and the general appearance was normal except for some atrophy in a few remaining spots. This man's enthusiasm over the treatment knew no bounds for, because of his disease, no rooming house would allow him in it. This was the most remarkable result in the treatment of lupus erythematosus I had ever seen.

Several months later, however, the patient presented himself with a recurrence in a few patches that apparently had not been sufficiently exposed.

CASE 12. LUPUS ERYTHEMATOSUS. L. O. Female, 38 years of age, German.

HISTORY. Lesion began on the left side of nose as an itchy, scaly patch 8 years ago. It has never been well since. The patient has had numerous methods of treatment, among them a long course of iodine locally, and quinine in large doses. When first seen the patient had a beefy, thick lupus condition involving the whole of nose and extending bat-winged like on each cheek. It was of the distinctly deep, granular scarring type. This patient after 6 months has healed except for slight evidences of the disease at the top of nose and a split pea sized spot across the bridge of nose. These two areas seem to be hard to get at with the quartz windows now at my command. It may seem expedient to apply carbonic snow as there is already a distinct, sharply defined atrophy present, due to the deep character of the disease. This is also a most pronounced result.

CASE 13. LUPUS ERYTHEMATOSUS. L. G. Female, aged 19, German.

HISTORY. Three months ago, patient had a small spot appear on the cheek below the left eye. Two months ago a spot appeared on the right side of nose near inner angle of the eye and about the same time a patch came on right cheek below the right eye. These lesions have grown until they are now about the size of quarters, are fairly superficial and slightly scaly, with some evidences of atrophy and are very typical lesions. Patient has always been well and strong and never had any other skin lesions. After a single, prolonged exposure the patient is and has remained well seven months, with only slight atrophy where the worst of the lesions were.

CASE 14. LUPUS ERYTHEMATOSUS. R. O. Female, aged 20 years.

HISTORY. Patch first appeared on the left cheek 8 years ago. Patient was in hospital afterward for 8 months and the lesion healed, leaving a scar behind it. It soon, however, broke out again, was again treated in the hospital and healed with another recurrence soon following. When patient was first seen she had a patch of typical lupus erythematosus the size of a quarter on the left cheek and immediately above it a decided scar at the sight of the old treated lesion. After 2 applications of the Kromayer light this patient is and has remained well 7 months.

CASE 15. LUPUS ERYTHEMATOSUS. R. di F. Female, aged 14, Italian extraction.

HISTORY. The lesion began 6 years ago apparently as a "red pimple" on the right side of the nose and disappeared under sulphur ointment, but another spot soon came on the left cheek, later one on the left side of the nose, and finally, spread over both cheeks and lobes of both ears.

When first seen the patient presented a butterfly-shaped lupus erythematosus, superficial and scaly in character, over the nose and both cheeks in pretty nearly a solid patch, combining an area probably as large as a man's hand. This patient has had many applications, owing to the extent of the lesion and at least three-fourths of this area has cleared without scarring. The patient is, of course, still under treatment.

CASE 16. LUPUS ERYTHEMATOSUS. C. H. Female, 38 years old, German, extraction.

HISTORY. This patient's trouble began 8 years ago and spread rather rapidly after typhoid fever. The lesion has been cauterized several times, but without much effect.

When first seen, this patient had a solid patch occupying the left side of nose and extending out on the cheek for about two inches. This lesion also extended across the bridge of the nose on to the right side and somewhat on to the right cheek. After numerous treatments, the patient still presents a small patch across the bridge of the nose and one near the inner canthus of the left eye, which are still under treatment. Scarring is seen in some parts of the healed areas due to their original deep seated, seborrhœic inflammatory character.

CASE 17. LUPUS ERYTHEMATOSUS. R. F. Female, aged 36 years, English.

HISTORY. Six years ago the lesion first appeared on the lobe of the right ear, and was thought to be a chilblain. Shortly afterward, lesions appeared on the top of head, rapidly spreading and extending in patches down to and including the eyebrow.

When first seen, a typical lupus erythematosus occupied the left half of the

scalp, that part of the face between the right eye and right ear, the right half of the forehead and the lobe of the right ear and there was also a patch on the left side of the nose the size of a quarter. The lesions treated on the face are greatly improved after 2 or 3 applications. No effort has as yet been made to treat the scalp, but here I intend to try exposures at a distance of several inches, producing pronounced sunburn and watch the result.

CASE 18. LUPUS ERYTHEMATOSUS. L. M. W. Female, aged 22 years.

HISTORY. Lesion began as a papule on the right malar region 2 years ago. It gradually spread and 15 months ago a patch came on the left cheek; latterly two small patches have appeared on the right upper lip. The lesions, except on the lip, were quite deep and thick and inclined to be inflammatory. They were a little larger than a 5 cent piece. After several treatments, four moderately long applications being required for one of the patches, the lesions have apparently recently healed, leaving scars where the deep lesions were and pigmented areas where the patient was exposed to the light.

CASE 19. LUPUS ERYTHEMATOSUS. M. B. Female, 31 years of age.

HISTORY. Three years ago, patient first noticed trouble on the nose which disappeared slowly under salves, but reappeared 1½ years ago and has gradually spread since then. When first seen, the patient presented a thick, inflammatory lupus patch, partially covered with seborrhœic-like, greasy crusts, occupying the top and sides of the nose and extending in a small patch on the left cheek. This has been the most resistant case to treatment I have seen, but is well on toward a cure now, the crusts having ceased to form and the lesions having been leveled to the surrounding skin. There are islands in it of new scarred tissue. I believe there is no doubt about the ultimate favorable outcome of this case.

CASE 20. LUPUS ERYTHEMATOSUS. D. F. Female, indefinite age.

HISTORY. Lesion began as a red patch on the side of patient's face 3 years ago. It has never been healed since, but has gradually spread until, when first seen, there was a patch on each cheek larger than a silver dollar, typical of lupus erythematosus. This patient was greatly improved after 2 treatments. She disappeared from observation after the third séance and I cannot, therefore, report on the result of this last application.

CASE 21. TUBERCULOSIS VERRUCOSA CUTIS. F. McV. Male, aged 27, occupation, unpacking chinaware.

HISTORY. Six months ago the lesion began as a small papule on the back of the right hand near the base of the little finger, and has gradually grown and assumed the typical warty character of this lesion. It is about the size of a quarter. When last seen, there was only a vestige of the lesion left after 3½ hours of exposure to the light in divided doses. At that time a fifth exposure was given and the patient has not since reported for observation. I see no reason, from the marked benefit produced in this case, why it could not be carried on to a successful termination.

CASE 22. NEVUS UNIUS LATERALIS. J. D. Female, aged 11.

HISTORY. Since birth patient has had a typical brownish, warty mark on the left half of the chin and left infraaxillary region. Comparative results are being observed after applications of carbonic snow and the light and indications so far are that the snow is the quicker and surer means of attacking this condition. Enough improvement, however, is seen after single exposures to the light to certainly warrant other applications to these areas.

CASE 23. NÆVUS PILOSUS. M. B. Female, aged 19.

HISTORY. Since birth patient has had a pigmented, hairy nævus on the right cheek, the size of a 5-cent piece. The lesion was considerably elevated, almost warty and covered with stiff, black hairs. After four very prolonged applications, the discoloration has been removed and the lesion is considerably leveled, but the hairs still retain their onetime vigor.

I have used the Kromayer light with more or less success in several cases of eczema, particularly of the circumscribed, chronic, so-called parasitic or mycotic type. In these cases exposures were made at a distance of 3 to 5 inches, of 5 to 10 minutes' duration, producing an eventual sunburning of the skin. One patient, after a 10-minute application, had quite a pronounced sunburn which made him uncomfortable for 2 or 3 days, but the exposed eczema was considerably benefited. One case in particular stands out, i. e., case 24.

CASE 24. CHRONIC ECZEMA OF THE ANUS AND SCROTUM, the old LICHEN CRONICUS CIRCUMSCRIPTUS, so-called. W. C. D. Male, 40 years old.

HISTORY. For 20 years this patient has been harassed and sometimes almost crazed by his condition. Almost every known means has been used by some of the most prominent dermatologists in this country with either no effect or only temporary relief. The condition was a sharply margined, thick, lichenoid, scratched eczema, with almost intolerant itching and only the most soothing applications could be used, because of the tendency for this to become an acute inflammatory condition.

For the past 10 months this patient has been under weekly or semi-weekly exposures, keeping the lesions covered between times with soothing ointments and he unhesitatingly declares that he has had the most comfortable 10 months in the past 10 years. The lesions are leveled and, except for scattered recurring papules, the skin seems normal with a rather unusual circumscribed whitening.

For $2\frac{1}{2}$ years I had with consultations and by personal efforts tried to, at least, make this man more comfortable, but until the Kromayer light treatment was begun, I never had benefited him in the least.

In thick patches of psoriasis I have found this an effective and safe means of quickly removing them, one application being usually sufficient for any patch.

In the itching of eczema and many other pruritic conditions, applications enough to produce a mild sunburn can regularly be counted upon to relieve it.

Three cases of generalized alopecia areata were treated. No apparent effect was produced in one case after 3 months. In another case, however, a down began to appear over the exposed areas, 5 to 6 weeks after the applications were begun and certain it was that hair returned and grew more rapidly on the exposed areas than on corresponding areas which had not been exposed. The third case

has been so irregular as to attendance that, though no results have been obtained after 5 months, a fair judgment cannot be made of any possible effect.

In all, I have treated 30-odd cases which have received between two and three hundred exposures to the Kromayer light, and in no instance have I so far seen any untoward results after one or many applications.

CONCLUSIONS.

1. That the Kromayer light is a useful addition to a dermatological armamentarium.
2. That, insofar as I can learn and from personal experience, with reasonable care, it is a safe agent both from the patient's and operator's point of view, never having produced a protracted dermatitis, telangiectases or scarring of any moment.
3. That it is easy of application and regularly in order.
4. That it is the most efficient means I know of in treating *naevus vasculosus*.
5. That it compares most favorably in every way with the Finsen light in the treatment of *lupus vulgaris* and can seemingly be relied upon to heal the lesion.
6. That it is a very effective and sure means of healing *lupus erythematosus* lesions and with a minimum amount of scarring.
7. That it is of the greatest help in the treatment of chronic *eczema*, particularly of the parasitic type.
8. That in *psoriasis* it is a safe and efficient means of quickly removing disfiguring patches.
9. That reports would strongly indicate its usefulness in *acne furunculosis*, *folliculitis* and *scrofuloderma*.
10. That it may be an effective means of treating *alopecia areata*, *tuberculosis verrucosa cutis*, *naevus unius lateralis* and pigmented *naevus*.

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CLINICAL REPORTS.

MYCOSIS FUNGOIDES OCCURRING IN A NEGRESS.

By BERNARD WOLFF, M.D., Atlanta.

MYCOSIS fungoides scarcely can be classed as a novelty, but the extreme rarity of its occurrence in a member of the negro race would appear to justify the act of recording an additional example of it. Two cases have been reported with elaborate analyses and full bibliography by Strobel and Hazen of Baltimore. Of these, one was in a mulatto and the other in a full-blooded negro. These, with the pres-

ent instance, constitute the total number of recorded cases among negroes of this singular and formidable disease. The case of mycosis fungoides contained in Howard Fox's paper on "Skin Diseases in the Negro," which appeared in *THE JOURNAL* a few years ago was found, according to Strobel and Hazen to have been founded upon a mistaken diagnosis.

The following is the history of a case corresponding in all essential features to the accepted description of mycosis fungoides:

Mary Webb, a full-blooded, prognathous negress, was referred to my service at the Grady Hospital in June of 1912. She is of low intelligence, but is able to give a fairly clear account of her ailment. She is 30 years old, but looks older; she was born in South Carolina, is married and the mother of three healthy children, the youngest being 11 years of age. Her father died early of an unknown febrile affection, her mother in old age of paralysis. Her occupation is that of a cook and domestic servant. Her health was always good up to two years ago when it began to decline markedly. Nine years ago, numerous scaly spots appeared on her face and neck. They were, she states, "like nettle rash" and itched immoderately. These spots remained more or less in evidence for several years, then disappeared. After an interval of several months, when she thought herself well, the spots reappeared upon the face, neck and, in addition, upon the upper part of the body. They followed the same course as in previous outbreaks; itching, remaining stationary for a time, then disappearing. There were a number of these disappearances and recrudescences until two years ago, when there was a very severe outbreak which has persisted. The scaly patches became thickened, elevated and in some instances raised abruptly above the skin in rounded, dome-like masses. These masses at times flattened down but soon again became prominent. The patient's health was good until the tumors appeared, when it failed rapidly. She has lost thirty pounds in weight, is constipated and the appetite is capricious. She feels languid, sleeps poorly and is unfitted for work. Her temperature was normal and the pulse 100, at the time of the examination.

A study of the objective appearances of the eruption reveals clearly that the disease is in a state of activity, inasmuch as fresh lesions are freely commingled with older ones and there are many tumors of varying size and degree of development. The primary lesions are of two kinds: a firm, slightly rounded, lichenoid papule and a scaly, slightly raised patch, from the size of a dime to that of a fifty cent piece. The papules appear paler than the surrounding normal skin. They are the size of bird shot and occur chiefly upon the extremities, but are also found sparsely distributed upon the neck, thorax and abdomen. They are numerous and show a disposition to form thick, elevated patches about the flexures of the elbows and popliteal spaces, where they are densely massed. The face and scalp are nearly free from the papular eruption. When not closely grouped, the papules show a marked tendency to remain unchanged for long periods. Here and there, a papule will rise slowly above its fellows and without apparent change in conformation, develop into a nodule and thence into a tumor. Patches developing about the flexures of the joints are evidently due to a fusion of the papular elements, as papules are found closely hugging the borders of the patch. They are distinct from the elevated patches formed from preëxisting scaly spots, as the latter occur where there are no papules in the immediate neighborhood.

Scaly spots as an original lesion are numerically fewer than the papular lesions. They occur sparingly on the back, sides of the chest and upon the abdomen. As the lesions advance, there is a disposition for them to develop elevated, scaly borders, to clear in the centre and to show an easy centripetal

sloping. Other spots may extend circumferentially, coalescing with adjacent spots and forming rings. The scaly spots, whether recent or remote, share, in common with the papular lesions, the quality of intense itching.

The two types of patches, lichenoid and psoriasiform, with increase in extent, become confluent, but do not appear to form homogeneous plaques, inasmuch as they are separated from each other by deep lines and furrows, producing a rough, bark-like surface. This condition is especially noticeable about the axillary and thoraco-axillary regions and around the neck. In the last situation the lesions surround the neck in the fashion of a rough stock. At the back of the neck, from the hair-line to the nucha, nearly all of the scaly patches have developed into tumors of unequal size and salience. Some are mere buds, others fully matured, the skin covering them eroded and oozing a sticky fluid. The tumors are rather firm but at the same time elastic and compressible, especially the larger growths. The smaller tumors show very little change in the skin covering them, except in pigmentation. They are dry, smooth and darker than the older growths. On the abdomen and sides of the chest the lesions are arranged in thickened, scaly, transverse ridges, corresponding to the skin folds. A few inches to the right of the navel, there is a flattened, raw, oozing growth, the size of a lemon. There are numerous growths, infiltrated, raised patches and buds on the buttocks, inner faces of the thighs and about the knee joints. The lesions are absent from the legs and feet and from the face, except for a small, slightly raised, scaly patch at the nasal angle of the upper lid. There is no perceptible enlargement of the lymphatic glands.

Viewed as a whole, the eruption resembles in part, patches of inveterate psoriasis of the rupioid type and in part the papules and hypertrophic patches of lichen planus, with a bizarre feature of tumors added to fill out the picture. On closer inspection, however, the resemblance fades.

A section from one of the older tumors was made and an entire bud was excised and given to Dr. John Funke of the Carnegie Laboratory of the Atlanta College of Physicians and Surgeons, who reports as follows: Except at one point, the margin of the sections is covered by a stratified layer of squamous epithelial cells, some of which are pigmented. The only comment to be made upon this layer of cells is that the papillary projections are, as a rule, rather short, although transverse section of these structures can be seen at a few points in the underlying structures, some of which appear to have undergone cystic degeneration. From the blurred and necrotic appearance of the exposed tissue, where the epidermis is missing, one is led to believe that the loss occurred before the section of tissue was removed from the patient.

The corium is much altered at many points. There is a scantiness of connective tissue at most points and abundant cellular elements present. When one compares these areas, in which the connective tissue of the corium is fairly abundant, with the altered areas, one is inclined to conclude that the cellular elements have invaded these areas and substituted the connective tissue—a condition which suggests a change of a malignant character. The invading cells vary in size and shape; some are spherical, others are oat-shaped, but most of them are polyhedral. The nuclei are comparatively large, contain an abundance of chromatin and consequently stain intensely with the basic dyes. The protoplasm, on account of its scantiness, is not easily studied; then too, at some points, the cells are so closely packed that an accurate study of this substance is not possible. Where the cellular elements are not so closely packed, one cannot identify an intercellular substance, but the picture presented is not at all unlike that of sarcoma. Where the structures of the corium are fairly well maintained, the cells are not very abundant but many resemble those already described. In the deeper structures there are also many cells like those just mentioned but they seem more closely packed and tend to occur in groups, in which areas there is very little fibrous tissue. The surrounding connective tissue seems

PLATE XXX.—To Illustrate Article on "Mycosis Fungoides Occurring in a
Negress," by BERNARD WOLFE, M.D.



Fig. 1.
Mycosis Fungoides in a Negress.

to enclose these collections of cells but the probabilities are that the condition is so in appearance only and that the fibrous tissue disappears as cell invasion occurs. At some points the connective tissue is very abundant but never acellular. This dense fibrous tissue not infrequently contains a black substance that presents all the appearances of pigment. This black substance is often seen among the cell collections in the deeper structures. The blood vessels are most abundant in the dense fibrous tissue; they always have rather thick walls. Now and then, a small blood vessel can be seen among the cellular elements but the walls of these structures are not so thick, yet always well formed. The corium seems to bear the brunt of the disease and in this is not at all unlike sarcoma. The collections of cells in the deeper structures present an appearance very much like that of lymphangioma hypertrophicum as described by Ziegler, which neoplasm not infrequently becomes malignant and the histological picture, as a whole, appears to warrant such a diagnosis.

DERMATITIS HERPETIFORMIS WITH A TRANSITORY PEMPHIGOID ERUPTION.

By HENRY KENNEDY GASKILL, M.D., Philadelphia.

Associate in Dermatology, Jefferson Medical College.

IN reading the late Professor Duhring's classical description of dermatitis herpetiformis—and particularly in the seventeen articles which are collected and bound by the New Sydenham Society, 1893—if there is any one point which is persistently emphasized, it is the constant changing of the manifestations of this disease from one type to another. While one form of eruption may predominate at the time of diagnosis, in the next few days this may have completely changed to an entirely different type. Vesicular may become pustular or the reverse may take place, but very little is said about the vesicular becoming bullous and resembling a true case of pemphigus. Duhring says that he saw twenty cases in fifteen years, in private and hospital practice. In the past five years, we have had the opportunity of observing sixteen unquestioned cases in the Jefferson Medical College Hospital alone. Whether this is suggestive of the disease becoming more prevalent or that it is purely accidental that so many should come to the one hospital for treatment, is problematic. All of these cases were under our observation for some time and without doubt are included in other hospital statistics; for, with a trouble such as this, of such long duration, with the intense and intolerable itching, the patient seeks relief in every hospital in town, thinking that each one can do more for him than the last. But in none of these sixteen cases has the change to the pemphigoid type been observed, with the exception of the following case:

Mrs. R. W., 42, Russian Jewess, had been in this country about ten years but could speak no English, making it very difficult to obtain a clear history, on ac-

count of her inability to translate our indifferent German into her Yiddish. The patient was small, emaciated, had an anxious look and, had she been of the Anglo-Saxon type, would have been extremely neurotic, but, instead, showed the result of her peasant ancestry—indifferent alike to pain, discomfort and waiting. She first presented herself at Jefferson Hospital in July, 1911, with a scattered eruption on the back, arms and upper part of the chest. Papulo-vesicular in character, the lesions were typically grouped and with little tendency to rupture, except where vigorous scratching had occurred. Brownish pigmentation was quite marked, showing the results of previous inflammatory eruptions and deep excoriations, most pronounced on the deltoid region. They varied in size from a small pinhead to a pea, the papules being slightly elevated above the surrounding skin and were situated on an inflammatory base. These papules outnumbered the vesicles five to one. Below the waist, there was no eruption and had not been in the year that she had been suffering from this affection. On hasty examination, the eruption resembled very closely that of pediculosis vestimentorum. The greater number of the lesions were across the top of the scapular and over the deltoid muscles, but the papulo-vesicular character, the grouping and the absence of the eruption from any other part of the body made it comparatively easy to throw out that diagnosis. She came to the Dispensary every week until July 15, 1913. During this time every remedy that we could think of was applied; internal medication was given freely but with very little or no result. At no time in the two years had there been the slightest improvement; on the contrary, the number of papules, vesicles and pustules had steadily increased, but the eruption had not extended below the waist line or on the face until July 12, 1913, when she presented on the ankle of the left leg and on its posterior surface, a group of larger vesicles than she had ever had before, on any part of the body. These were very firm and could be ruptured only with considerable pressure (Fig. 1). The itching was not marked but there was so much pain that she walked with a decided limp. On the 19th of July, just one week later, there had developed on the same leg, eight large vesicles, from three-quarters to an inch and a half in diameter and filled with a clear serum (Fig. 2). Interspersed were various sized vesicles, larger than those which she had on the upper part of the trunk, but no papules were present. These vesicles extended as high as the knee and some had ruptured spontaneously; there was no eruption on the right leg, nor was there a bullous eruption on any other part of the body. The papulo-vesicular eruption on the trunk and arms was of the same character as the previous outbreak, with no tendency of the vesicles to become larger. This condition lasted on the leg only about ten days; considerable relief was given by sulphur ointment, though this had had no influence on the eruption on other parts of the body, when given before.

Following this bullous eruption on the leg, however, the general condition became very much worse, spreading to the face and down the legs as far as the knees and the arms to the wrist. Beneath the eyes was a solid group of vesicles which had ruptured and the entire area was covered with a firm, yellowish crust. This same character of eruption was present on both breasts, forming an area of about an inch and a half around the nipple. Up to the time of writing, there had been no change except the occasional conversion of one type of lesion to the other and there had been no return of the large bullæ on any part of the body.

PLATE XXXI.—To Illustrate Article on "Dermatitis Herpetiformis with a
Transitory Pemphigoid Eruption," by HENRY KENNEDY GASKILL, M.D.

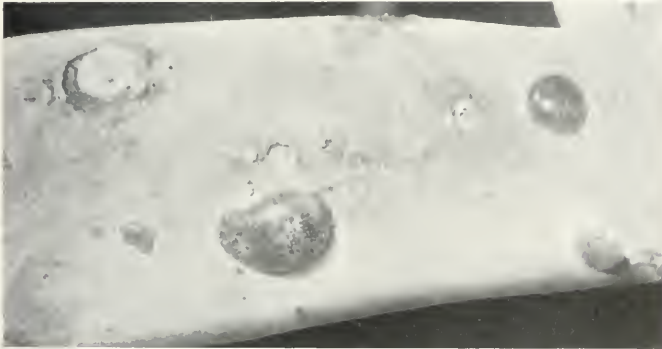


Fig. 2.
Showing vesicular and bullous
lesions on leg.



Fig. 1.
Showing vesicular and bullous lesions on ankle.

SOCIETY TRANSACTIONS

NEW YORK DERMATOLOGICAL SOCIETY.

Regular meetings, Dec. 16, 1913, and Jan. 27, 1914.

JOHN A. FORDYCE, M.D., *President*.

CASE FOR DIAGNOSIS. Presented by Dr. TRIMBLE.

The patient came from the University and Bellevue Clinic. He presented a lesion near the outer canthus of the eye which was rough and had one or two milium-like bodies in it. The lesion had been present for six or eight weeks. When first seen it had existed only three weeks. The patient claimed that there was nothing present before that time, the skin being perfectly smooth and normal.

DISCUSSION.

Dr. SCHWARTZ said that it looked like a senile keratosis.

Dr. FORDYCE said that it impressed him the same way.

Dr. TRIMBLE said that he hardly knew what to think of it. He had seen the man once a week for seven weeks, but had never seen anything that might distinctly be called vesicular, although a couple of weeks ago it seemed as if a little moisture was present; this might have been a little secretion under the crust. The patient had no subjective symptoms. It might possibly have been a precancerous condition, such as a senile keratosis.

CASE FOR DIAGNOSIS. Presented by Dr. TRIMBLE.

The patient was a young woman, 23 years of age, born in Cuba, and had been in this country for sixteen years. Scattered over the whole body, with the exception of the legs and face, was a pigmented condition, the lesions varying in size from that of a match-head to that of a split pea. At times, a small reddish papule could be seen, which eventually left a pigment spot. About ten months ago she had an attack of grippe, and at that time a crop of papules and "water blisters" appeared suddenly, leaving the stains. There was a slight itching at times, but this was not a marked symptom.

DISCUSSION.

Dr. Fox said that he would not make a positive diagnosis, but, abandoning the erroneous idea that pityriasis rosea was necessarily manifested in rings or oval patches and always ran an acute course, the diagnosis of pityriasis rosea was the only one he could think of in this instance. He had seen a number of cases where the whole trunk was covered with numerous scaly red papules, with no tendency to ring formation, and in other instances as slight an eruption as in this case.

Dr. FORDYCE said that Dr. Fox's suggestion seemed very plausible.

EPITHELIOMA DEVELOPING IN A LESION OF LUPUS VULGARIS.

Presented by DR. MACKEE for DR. FORDYCE.

The patient, a woman of 57, was from Dr. Wise's service at the Vanderbilt Clinic. She had a lupus vulgaris of the left cheek and ear which began thirty years ago and which was still active. During the past eight or ten years she had received extensive X-ray treatment by the intermittent-dose method, over 200 treatments having been given. The entire left cheek and the ear was atrophic and telangiectatic, and scattered throughout the region were numerous apple-jelly nodules. On the left cheek, also, was a vegetating tumor, the size of the palm of a man's hand. This was proven by histopathological study to be a squamous cell epithelioma. The question to be considered was whether the epithelioma was the result of the lupus or of the X-ray.

The speaker said that it would be interesting to compare the number of cases of epithelioma developing on lupus vulgaris before the advent of radiotherapy, with the number of similar cases occurring since the X-ray had been so extensively employed. In the past, many cases of lupus had received enough X-ray to produce an epithelioma—probably as much as had produced cancer on the hands of X-ray operators. This was before the advent of the massive or intensive X-ray method; and the speaker thought that it was not at all improbable that the excessive X-ray treatment might have had a marked influence in the production of such malignant neoplasms. Although apparently a paradox, yet a single intensive X-ray treatment would cure an X-ray cancer, providing only rays of a Benoist No. 9 or 10 were utilized and, also, providing the growth had not been exposed to the X-ray for several years. The highly penetrating rays seemed to possess the same therapeutic efficiency as the gamma rays of radium. Both agents were, the speaker said, able to cure X-ray cancer if properly applied.

DISCUSSION.

Dr. Fox said that Hebra laid stress on the fact that epithelioma was apt to occur on a lupoid basis.

Dr. FORDYCE said that he had seen a case of epithelioma develop on a lupus of the arm.

ARSENICAL EPITHELIOMA. Presented by DR. MACKEE for DR. FORDYCE.

The patient was a single man, 37 years of age, a native of the United States. He gave a history of having had chorea when 8 years of age, for which he took arsenic (Fowler's solution) in large doses, more or less constantly over a period of fifteen years.

About six or eight years ago he noticed the development of several red, slightly rough, pale-red plaques on his body. Some of these grew to the size of a 25-cent piece. With the exception of the spontaneous disappearance of two or three of the lesions, they all persisted and new ones developed. About the same time, pinhead to split-pea sized, horny growths developed on the backs of the hands.

When presented to the Society, there were fourteen lesions scattered over the abdomen, back, arms and legs. They ranged in size from a split pea to a 25-cent piece, were almost flat, pale red, slightly scaly, and there was a perceptible rolled, pearly margin. The backs of the hands were studded with numerous keratoses, ranging in size from a pinhead to a split pea. The palms of the hands were the seat of a generalized hyperkeratosis and, also, of a hyperidrosis. Besides many lentiginous lesions on the shoulders, arms and upper part of the back, there was a faint pigmentary mottling over the body, which was probably due to the arsenic. There was, also, a band of leucoderma on the left side of the

neck and the left shoulder, in which the hair was white. This was probably a nævus. There were no freckles in this area.

A histopathological study, made in the Dermatological Laboratory, showed irregularly distributed areas of small celled infiltration in the corium. There were several small areas showing complete degeneration of the basal cell membrane and the presence of the cells in the papillae, significant of basal-celled epithelioma.

The hand lesions showed a marked hyperkeratosis. There was, also, an acanthosis resulting in a thickening of the interpapillary pegs rather than their prolongation—giving the appearance of flattening. In the papillary layer there was an inter and intracellular oedema. In places, there was a little degeneration of the basal membrane and a slight increase of mytosis. The picture was suggestive of præepitheliomatous changes.

DISCUSSION.

DR. FORDYCE said that it was a very interesting case. Hutchinson called attention to the development of epithelioma following the use of arsenic, and in view of the general use of salvarsan, it was perhaps necessary to consider this possibility.

DR. TRIMBLE recalled a case seen a month ago. A man, 65 years of age, had had psoriasis for forty years and had been treated with arsenic over long periods. He had an arsenical keratosis of the palms, and an arsenical cancer of Hutchinson.

DR. MACKEE asked if any one had ever seen basal cell epithelioma having arsenic as its ætiological factor. He also asked Dr. Fordyce if he thought there was any danger of arsenical cancer and pigmentation developing several years after the administration of repeated doses of salvarsan.

DR. FORDYCE replied that that was a point worth consideration.

ANGIOMA UNDERGOING SPONTANEOUS RECOVERY. Presented by DR. MACKEE for DR. FORDYCE.

The patient, a little girl from Dr. Wise's service at the Vanderbilt Clinic, presented a cavernous angioma, two inches in diameter, on the left cheek. The centre of the lesion was white and depressed, while the margin was swollen and of a deep red color. The only treatment that had been given was collodion which had been applied every few days for several months. While it was possible that this treatment had had some influence upon the lesion, Dr. MacKee thought it was a case of spontaneous involution. Cavernous angiomata were common in children, but were not often seen in the adult, a fact that would signify that spontaneous recovery was not uncommon.

DISCUSSION.

DR. HOWARD FOX said that he had long been convinced that the majority of cases of cavernous angioma disappeared spontaneously without treatment. He felt that this must be true from the fact that such lesions were frequently seen in children, though very rarely in adults. Their disappearance could not be ascribed to treatment, as many cases undoubtedly received no treatment at all.

PIGMENTARY NEVI. Presented by DR. KINGSBURY.

The patient was a woman showing a mildly interesting example of pigmentary nævi. She stated that her mother first noticed the condition when she was 4 or 5 years old.

LYMPHANGIOMA. Presented by DR. MACKEE for DR. FORDYCE.

C. S.; male; married; 43 years of age; born in Norway; had lived in the United States for twenty-five years; hoisting engineer by occupation.

PAST HISTORY. The patient had had occasional mild attacks of rheumatism. Twenty years ago he had a chancroid and a marked inguinal adenitis; also, an attack of gonorrhœa. Twelve years ago he was circumcised. A few months later he developed a backache and a chill which was followed by fever. This was accompanied by the appearance of two or three small vesicles on the dorsal surface of the prepuce, close to the scar left by the circumcision. There was, also, some œdema of the penis and some itching.

Since that time he had had from three to five of these attacks each year. They had gradually become more severe in their local manifestations, until the entire dorsal surface of the penis, the anterior surface of the scrotum and the pubic region became involved in the process.

When presented to the Society the penis and scrotum were markedly œdematous. Scattered over these organs and over the pubic region were numerous translucent and semi-translucent, pinhead-sized, thick-walled vesicles, singly and in groups. When confluent, the mass was composed of from four to eight vesicles which had lost their individuality and the lesion resembled a dime or quarter sized multilocular cyst. In many lesions of this character there was an exudation with crusting. This, with the irregular surface produced by the different elevations of the individual vesicles, produced a vegetating appearance. The lesions were collapsible. When opened, an oozing of blood and serum was noted. Years ago the lesions disappeared between attacks, but more recently they had not done so. In addition to the vesicular lesions and the œdema, there were a large number of follicular pustules scattered over both thighs.

Dr. George Warren made a thorough examination of the genito-urinary apparatus, but failed to detect anything abnormal. This examination included an analysis of the urine.

A histological examination, made in the Dermatological Laboratory, showed a hyperkeratosis, a very marked acanthosis, with a pronounced œdema and vesiculation of the epidermis. There was a small round-celled infiltration, containing plasma cells, throughout the pars papillaris. There was a marked œdema and the blood vessels were dilated and increased in number. The most notable features were the dilatation of and increase in the number of lymph spaces. The endothelial cells lining the large lymph spaces were proliferated. The pars reticularis showed the same changes, only in a less marked degree.

EPITHELIOMA DUE TO THE ROENTGEN RAY. Presented by DR. MACKEE for DR. FORDYCE.

Ten or twelve years ago the patient was an X-ray operator in an Albany hospital, where he received an enormous amount of ray on the back of his left hand in divided doses, over a period of several years. At that time he remembered having had several attacks of erythema. About six or eight years ago the patient discontinued X-ray work and has not since been exposed to the ray. A few years ago keratoses began to develop, one of which, within the last few months, grew rapidly until a walnut-sized, ulcerating tumor was formed. This was ablated one month ago, the excision extending well beyond the tumor. A histological examination revealed a squamous-celled epithelioma.

When presented to the Society, there was a soft, bean-sized growth which had developed in the scar from the operation. This demonstrated how difficult it was to prevent a relapse after surgical ablation. In surgical procedures one was limited in the amount of tissue that could be removed. Dr. MacKee said that both the X-ray and radium, if properly administered, would cure X-ray cancer

and preëpitheliomatous conditions caused by the X-ray or by radium, providing the parts had not been exposed to these agents for several years. He, therefore, proposed to remove the tumor by surgical ablation, and then expose the entire region to one dose of the X-ray, which would consist of from 14 to 16 Holzknecht units of a Benoist No. 10 ray, filtered through 3 millimetres of aluminum. A photograph of the original tumor was exhibited.

In addition to the tumor already described, there were numerous keratoses scattered over the hand and fingers. There was not nearly as much atrophy and telangiectasia as was usually the case. A curious feature was a superficial, vascular nævus of the affected forearm and hand. This had not been affected, at least not to any great degree, by the X-ray exposures.

DISCUSSION.

DR. TRIMBLE said that perhaps a simple ordinary curettage would be better than to subject the man to further X-ray treatment, especially as the epithelioma might have been produced by the earlier treatment. He had understood Dr. MacKee to say that after the cells lost their immunity the ray could be reapplied with good effect, but even so, it seemed to him that curettage would be better for this individual case.

DR. FORDYCE said that success or the result in the treatment of epithelioma of the skin by the curette and caustics, depended upon the thoroughness of the procedure. One should carefully watch the granulations which develop after one treatment, and if they suggest a recurrence of the epithelioma they should be curetted off and the caustic again applied. Several repetitions of this procedure may be necessary before complete eradication of the disease occurred.

KELOID TREATED WITH THE X-RAY. Presented by Dr. MacKee for Dr. Fordyce.

The patient was a girl of 18 from Dr. Wise's service at the Vanderbilt Clinic. Three years ago she was operated upon for cervical adenitis. A keloid, 4 inches long and $1\frac{1}{2}$ inches wide then developed. It was very hard and of a decided red color. It was elevated $\frac{1}{2}$ inch above the niveau of the skin. Twenty-four Holzknecht units of a Benoist No. 9 to 10 ray, divided into six treatments, at intervals of four weeks, had been applied.

When presented to the Society the lesion was flat, but it was still quite red. A photograph of the keloid before treatment was exhibited.

RINGWORM OF THE SCALP TREATED BY THE X-RAY. Presented by Dr. MacKee for Dr. Fordyce.

This patient was presented for the double purpose of demonstrating the Adamson method of treating tinea tonsurans and to show an efficacious treatment that would, if widely employed, eradicate the disease from this country.

The patient, a little boy, from Dr. McMurtry's service at the Vanderbilt Clinic, had had a disseminated ringworm of the scalp with multiple kerions. He was treated by the Adamson method, which consisted, the speaker said, of dividing the scalp into five areas. These five areas were to be exposed to the X-ray at one sitting. Three weeks later all the hair would fall out. It would begin to grow in again, in from one to three months. The little patient had been treated four weeks previously and all the hair had fallen out. There had been no erythema, so that one could predict with absolute certainty that the hair would regrow, excepting, of course, in the numerous small scars left from kerions.

DISCUSSION.

Dr. Howard Fox complimented Dr. MacKee upon his excellent demonstration. During a recent visit to the London Hospital, Dr. Fox had been informed that within a period of eight months, 700 cases of ringworm of the scalp had been treated there by the X-ray, the entire scalp being epilated at one sitting. A complete cure of the disease had been effected in every case, without causing any permanent alopecia. Such results, he thought, were conclusive proof of the value of this method of treatment.

SQUAMOUS-CELL EPITHELIOMA TREATED BY INTENSIVE X-RAY METHOD. Presented by DR. MACKEE for DR. FORDYCE.

Dr. MacKee said he presented this case because it was the general belief that the X-ray had no influence upon squamous-celled epithelioma. The speaker had seen a number of cases of this kind cured in this manner, but he admitted that they were superficial growths. He had, he said, very little faith in the efficacy of either radium or the X-ray in the treatment of malignant cancer, when deep seated. Even in cases of superficial squamous-celled epithelioma, the results were so uncertain, that he preferred to employ other measures first and use the X-ray as a postoperative prophylactic. Some cases, either because of the location of the growth, the age of the patient, or other reasons, could not be operated upon, and then either the X-ray or radium should be given a trial.

The patient presented was of this type. He was a man, 80 years of age, who was under observation in Dr. Wise's service at the Vanderbilt Clinic. The patient, who was very feeble and in poor health, had a walnut-sized, squamous-celled epithelioma on the dorsal surface of the right hand. Six weeks ago he was given 16 Holzknacht units of a Benoist No. 10 ray, filtered through 3 millimetres of aluminum, at one sitting.

When presented to the Society, the tumor mass had disappeared, but the ulcerated centre had not yet healed, and there was still considerable infiltration at the margin. The effect of the treatment had now expended itself and it was time to repeat the dose. Whenever such a tumor was amenable to X-radiation it required, Dr. MacKee said, from one to three intensive treatments to bring about the desired result. A photograph of the tumor, taken before treatment was instituted, was also presented.

EPITHELIOMA OF THE TONGUE. Presented by DR. MACKEE for DR. FORDYCE.

The patient, who was from Dr. Wise's service at the Vanderbilt Clinic, was a man of 60. He stated that the disease began as a small ulceration on the left side of the dorsum of the tongue, 3½ years ago. Three years ago this was curetted and cauterized. The disease returned in six months, and since that time had been growing gradually worse.

When presented to the Society, there was an indurated tumor occupying the entire left side of the dorsum of the tongue and involving a portion of the right side. The surface was very irregular. There was not much pain, but the patient experienced difficulty in eating. He appeared to be in good health. The glands of the neck were involved. The Wassermann reaction, performed under the direction of Dr. Zinsser at the Vanderbilt Clinic, was negative. Dr. MacKee thought that it was a hopeless case.

TUBERCULOSIS OF THE MUCOUS MEMBRANE. Presented by DR. MACKEE for DR. FORDYCE.

The patient, an unmarried man of 20, was from Dr. Wise's service at the Vanderbilt Clinic. Three or four years ago, an ulceration occurred in the

mucous membrane of the cheek near the right commissure of the mouth. This extended over the commissure and involved a small portion of the skin. The external lesion healed spontaneously, but vigorous antisyphilitic treatment, tuberculin therapy and X-ray therapy had failed to control the lesion in the mouth. The patient was afflicted with pulmonary tuberculosis. Repeated Wassermann tests, performed by Drs. Mandel, Jagle and Zinsser, were always negative.

When presented to the Society, a dime-sized scar could be noted on the right cheek, which extended into the commissure. Beginning at the right commissure and extending as far back as the molar teeth, was an irregular swelling about one inch in width. There was no hard induration. Here and there could be detected areas of ulceration. There was very little pain.

The histological examination, made in the Dermatological Laboratory, showed a hyperkeratosis, a very marked acanthosis, and an intercellular and intracellular œdema. There was a small round cell infiltration in both the pars papillaris and pars reticularis of the corium. Plasma and mast cells were noted. Giant cells were present and were formed, apparently, by an obliteration of the blood vessels. There was a marked endarteritis.

Dr. MacKee said that the examination in this case was not yet complete, but that he hoped to definitely prove the diagnosis of tuberculosis.

DISCUSSION.

Dr. TRIMBLE expressed the opinion that these tuberculous lesions of the tongue and mucous membrane were much more common than was generally supposed. They were probably overlooked in former years and treated as syphilis or something else.

Dr. MacKee said that there was another case at the clinic with a small ulcer at the tip of the tongue, in which tubercle bacilli were found in the scraping.

Dr. Fordyce referred to several cases of tuberculosis of the oral mucous membrane which had lately been under his observation. In one of them bacilli had been demonstrated in scrapings from the ulcer.

MORPHŒA GUTTATA? Presented by Dr. MacKee for Dr. Fordyce.

R. R.; male; married; 43 years of age; born in England; carpenter by occupation. The patient, a tall, thin, neurasthenic individual, was from Dr. Wise's service at the Vanderbilt Clinic.

About four months ago, the patient noticed two white spots on the shaft of the penis and two similar lesions on the anterior surface of the scrotum.

These lesions were about one-quarter of an inch in diameter and were perfectly round. They were opaque and white, exactly like the fried white of an egg. This was so with the exception of the centre, which was slightly depressed below the margin of the lesion and which was atrophic in appearance, semi-translucent, covered with a whitish film, through which could be detected a slight violaceous tint. There was a slight violaceous areola around one of the lesions. The margins of the lesions appeared to be very slightly infiltrated. There were no subjective symptoms, excepting a slight itching.

The histological examination, made in the Dermatological Laboratory, revealed the following: The changes in the epithelium consisted of an atrophy in the centre of the lesion and an hypertrophy at the margin. The rete pegs were shortened and in places entirely absent.

In the superficial and deep corium there was a perivascular infiltration of round cells. The infiltration was extensive, deep and marked at the margin of the lesion. There was an increase in the number of blood vessels. There were a moderate number of plasma cells, some of which showed division and fragmentation of the nuclei.

SARCOMA INVOLVING THE EYELID AND CHEEK. Presented by Dr. FORDYCE.

The patient, a young woman 26 years of age, was referred to Dr. Fordyce's clinic about two weeks previously. She gave a history of having had a lesion of the eye about two years ago, which subsequently involved the lid and the adjacent tissue. About six months previously she was given an injection of tuberculin, which was followed by a very violent general and local reaction, after which the lesion spread with great rapidity. It had destroyed a great part of the lower lid, and the skin of the side of the nose and cheek. Several Wassermann tests were negative. The histological examination showed the lesion to be a round-celled sarcoma with a large amount of new vessel formation. The lesion was resolving under X-ray treatment.

BAZIN'S DISEASE. Presented by Dr. WINFIELD.

The patient was a female, age 32. Eight years ago she had a pelvic abscess, which was opened and drained. She recovered from this, and three months later one or two indurated patches appeared on the calf of her leg, and another on the front. There was a little suppuration and, from her description, necrotic centres, with deep scarring. The Wassermann test was twice negative; von Pirquet, positive. The black marks seen at the time of presentation were due to the application of silver nitrate. The condition was never very nodular—more superficial. It had lasted practically continuously for eight years. Last year she was free from the lesions for six weeks to two months. There was a good deal of pain and tenderness. The lesions never ulcerated until within the last two years. There were no enlarged glands.

DISCUSSION.

DR. WINFIELD asked for suggestions regarding treatment. A sea-voyage had been recommended and was tried, and the lesions disappeared—the first time for several years. She used black wash, slept out of doors, and kept the leg uncovered as much as possible. She wanted to know if she had to keep on making sea-voyages all the time.

DRS. HOWARD FOX and WHITEHOUSE agreed with the diagnosis.

DR. MacKEE said that a large series of cases of Bazin's disease had been treated at Dr. Fordyce's clinic with tuberculin. A few cases of lupus vulgaris had yielded to long-continued treatment; papulo-necrotic tuberculide and scrofuloderma had not responded at all. In Bazin's disease, on the other hand, every case was cured in a few months and there had been no relapses. The work was done three or four years ago. The speaker would, therefore, suggest that Dr. Winfield's patient be given the benefit of tuberculin therapy. The bacillus emulsion had been employed in Dr. Fordyce's clinic, the initial dose being about 0.00001 mg. The injections were given every five to seven days, and the dose was increased geometrically at the rate of 25 per cent.

DR. WINFIELD, replying to Dr. MacKee, said that he had planned to try the tuberculin injections. He had under observation a child with tuberculosis of the skin whom he had been treating with tuberculin for several months and who was nearly well.

ACRODERMATITIS CHRONICA ATROPHICANS. Presented by Dr. KLOTZ.

DR. KLOTZ said he thought the members would be interested in seeing this patient, who had first been presented before the Society twenty-five years ago. The Transactions of the New York Dermatological Society, 192d Regular Meeting, *Jour. Cutan. Dis.*, 1889, vii, p. 461, contain the following lines:

"DR. KLOTZ presented a man, 27 years of age, who, ten years ago, fell on his right knee, causing a contused wound, which was very slow in healing. From that time, he noticed a peculiar appearance of the skin, both in color and texture, affecting first the right leg and, subsequently, the left. At present, the entire frontal aspect of the right leg from above the knee to the foot, and that of the left leg from below the knee to the lower third of the leg, also the greater portions of the lumbar and gluteal regions, showed a marked atrophic condition of the skin. The veins were enlarged, and the skin of a dark bluish red color, dry and paper-like, without any natural moisture."

Dr. Klotz said that later the patient was presented to a meeting of German dermatologists at Frankfurt on the Main by Dr. Herxheimer as a case of *acrodermatitis idiopathica atrophicans*. At the time Dr. Klotz first presented the case, the patient had been under his care at the German Dispensary for eczema of the lower legs, of extreme obstinacy. After being lost sight of for a time, the patient again came under observation in the fall of 1909, on account of a severe dermatitis, which was probably due to some anti-scabies treatment which had been applied on account of an extensive pruritus. Dr. Klotz said that lately he had tried to heal a small depressed sore on the right foot, on the inside of the heel, which had proved extremely obstinate, although it was only the size of an almond.

The atrophic process had formerly extended over the lower extremities as far up as the gluteal region and over both hips, and also over the dorsal part of the left forearm and hand, and for a number of years had not progressed any further, but it left the skin over the affected areas in a very much impaired condition, whereby the patient was subjected to a great deal of suffering. The skin was dry and hard and, if neglected, soon became covered with a dry, horny, thin scale, which adhered closely and which, if abruptly removed, caused fissures and tears. There was a more or less constant itching over both legs, which could be quieted only with great difficulty. Lanolin and vaseline rubbed in served to keep the skin more pliable and soft, and superficial erosions healed under 5 per cent. salicylic acid plaster. There was also a tendency to oedematous swelling of the legs. There were no changes in the urine, nor any organic troubles.

DISCUSSION.

DR. JACKSON said that it was a very extensive case. He had never seen one involving both legs and extending so far up the back.

DR. WHITEHOUSE said that it was a most valuable and interesting exhibition, and that it was rather unusual to have the opportunity to see a case like that come back after twenty-five years. One seldom saw such an extensive case, and he himself had never seen such a one.

CASE FOR DIAGNOSIS. Presented by DR. FORBNEY.

The patient was a young woman, 21 years of age. She gave a history of a primary sore in June, 1913. This was followed by a macular rash, which disappeared under treatment. She presented over her trunk and extremities large brownish-red nodular lesions, which strongly suggested hypertrophic syphilitic papules. Her Wassermann reaction was strongly positive. In spite of eight injections of neosalvarsan and mercurial treatment, new lesions continued to develop. The histological examination of the tissue first removed showed an absence of cellular infiltration and a marked hypertrophy of the collagenous bundles of the skin. Subsequent histological examinations, after the case was presented to the Society, showed a cellular infiltration about the hair follicles, with a giant-cell formation, giving the idea of a follicular syphilide.

DISCUSSION.

DR. MACKEE said that the histological section was very similar to that obtained in Dr. Wise's case of dermatolysis. From a clinical point of view, however, in spite of the presence of a few atrophic macules on the chest, there was no resemblance to dermatolysis. It was very curious and perplexing to find an inflammatory lesion simulating a large papular syphilide with a histological section showing absolutely nothing but hypertrophy of the connective tissue. The speaker asked if it were possible that a mistake had been made—if the tissue might not have been obtained from another patient.

DR. KLOTZ said that the color was very bright for a papular syphilide; the type of lesion was really that of the wheal.

DR. G. H. FOX said that he would not think of going against the histological examination, but that clinically the case resembled syphilis rather than macular atrophy; the fact that she contracted the condition before the specific infection and that many of the tumors had a ring of smaller tumors around them, such as was often seen in mycosis fungoides, had suggested that diagnosis each time that he had seen the case. He would like to see the patient six months from now.

DR. FORDYCE said that there was no confusion in regard to the biopsy, for the findings of two sections were identical.

BULLOUS HÆMORRHAGIC LESIONS OF THE CHEST AND ARM FOLLOWING FRACTURE OF THE SKULL. Presented by DR. HOWARD FOX.

This patient had previously been presented before the Manhattan Dermatological Society, Jan. 9, 1914.

DISCUSSION.

DR. KLOTZ said that the single lesions bore some resemblance to herpes. The fact that they were hæmorrhagic would not speak against the herpetic origin, as hæmorrhages did occur with herpes, though not so often as in zoster. Recurrent herpes was by no means uncommon, particularly in herpes progenitalis.

DR. HOWARD FOX said that he was inclined to give up the idea that the lesions were produced artificially, after talking with the patient and the physician who had observed the case. It seemed very doubtful whether he could have inflicted any traumatism on the skin without leaving some pigmentation or scarring.

LEPROSY. Presented by DR. WINFIELD.

The patient, Percy B., was a boy 12 years of age. He had been presented before. He was born in Barbadoes. At one time, the nodules all disappeared under Duvall's treatment. Physically, he was in good shape. He has been under Dr. Winfield's care for four years. He had lesions in the nose, in which the bacilli were profuse. The lesions had been confined mainly to the face,—the cheeks, nose and lips.

EPITHELIOMA. Presented by DR. WINFIELD.

DR. WINFIELD said that he presented this patient on account of his youth, he being only 28 years of age. His family history was negative. He had had the ordinary diseases of childhood, and had had gonorrhœa four times. He denied chancre. The condition began four years ago, as a small papule on each side of the nose. He would pick at it, and the irritation caused it to grow, and is was getting a gradually piled up border. It was undoubtedly an epithelioma. The Wassermann and von Pirquet tests were both negative.

CASE FOR DIAGNOSIS. Presented by Dr. Winfield.

The patient was a colored man, 47 years of age, born in Virginia. Family and past history, negative. About a year ago, he presented himself at the Long Island College Hospital, complaining of cough, dyspnea and pains in the chest. At that time there were no lesions on the skin but the diagnosis then was probable tuberculosis of the lungs. In November, 1913, he entered the cutaneous service of the King's County Hospital, complaining of pain in the chest. Physical examination revealed nothing. His chief complaint was the presence of a fungating ulceration of the nose, involving all the mucous surface and extending up over the cutaneous covering of the nose. The skin of the face was swollen. There was a bloody mucous discharge from the nose. The patient said that the lesion did not pain nor itch. The diagnosis made in the throat department was syphilis. Repeated Wassermann tests were always negative; the von Pirquet, strongly positive. Sections of the tumor had been sent to the laboratory, but the report had not yet been received.*

* The pathological report was tuberculosis.

DISCUSSION.

Dr. JACKSON said that the fact of the lesion's occurring on the end of the nose and growing so rapidly strongly suggested syphilis, but that as the patient was a negro, a race peculiarly susceptible to tuberculosis, and as the von Pirquet was positive and the Wassermann negative, no doubt the diagnosis of tuberculosis was correct.

Dr. KLOTZ said that it would do no harm to try specific treatment, even if the Wassermann was negative.

Dr. WHITEHOUSE thought that the histological study would bear out the strongly positive von Pirquet test.

Dr. FORDYCE said that he had under observation at the City Hospital a patient, a negro boy, with a lesion which was the counterpart of this. When first seen, last year, the boy had papillomatous lesions on the roof of the mouth. As the Wassermann reaction was negative, a piece of tissue was cut out and examined, and showed a tuberculous structure. This year, on coming back to the service, he found the patient with enormous vegetations on the nose. The process had evidently extended and he had a laryngitis and lung tuberculosis. The enormous cauliflower-like growth extended from the anterior to the posterior nares. He gave a negative Wassermann and a positive von Pirquet. Dr. FORDYCE said he thought both cases were tuberculous.

TUBERCULOSIS VERRUcosa CUTIS. Presented by Dr. Winfield.

I. M., age 45; native of Long Island; occupation, farmer and fisherman. The family history was negative regarding syphilis and tuberculosis. When the patient was a small boy he fell and injured his head. After his recovery from the acute injury, he developed epileptiform convulsions; these attacks extended over a period of twenty years.

When the patient was between twenty and twenty-five a small wart-like growth developed on the little finger of the left hand. This slowly extended until it involved the back of the hand and the lower part of the wrist. At times the growth would ulcerate and after a time healing would take place, with considerable destruction of tissue. When presented to the Society, there was a small warty ulceration on the little finger, and an extensive warty ulcerating growth extending from the wrist almost to the elbow. The borders of the patch were thickened and ulcerated in places. In the centre of the large patch healing with scarring had taken place. The Wassermann reaction was negative. The von Pirquet was positive.

DISCUSSION.

Dr. MacKEE asked whether the bone involvement was primary or secondary.

Dr. WINFIELD replied that it was secondary, and that while the condition resembled tuberculosis he was strongly inclined to think it was blastomycosis, though he had not yet been able to find any indication of that. Tissue had been examined and the report was negative.

Dr. FORDYCE said that in blastomycosis there was usually a considerable amount of epidermic hyperplasia with miliary abscesses. It was not difficult to demonstrate the organism.

Dr. HOWARD Fox reported a severe reaction that had appeared in a young married woman whom he had recently treated with neosalvarsan. She had been given three intravenous injections of gram 0.5 at about ten-day intervals. There had been practically no reaction after the first and second injections. After the last injection, the patient had suffered from an extremely severe gastro-enteritis, with temperature of 104° F. and great prostration. This was followed by a dermatitis exfoliativa involving the entire cutaneous surface. At the end of five weeks she had made a complete recovery.

Dr. WINFIELD said that he had a somewhat similar case at the hospital, which received three doses of salvarsan at ten-day intervals. A week after the third dose, the patient developed a gastric condition and then a dermatitis of the arms, which spread to the hands and over the entire body. This lasted for two weeks and the man then died. An autopsy was performed, and it was expected that the stomach and kidneys would be found in bad shape, but the heart, stomach and kidneys were found to be normal, while the liver was acutely congested. About the same time, a woman who had received a second dose of neosalvarsan developed the same symptoms, but she was getting well. About a week ago he had given neosalvarsan to a private patient, who two days later had vomiting and acute gastritis, and a severe jaundice.

Dr. FORDYCE said, à propos of the case reported by Dr. Fox, that he had recently seen in consultation a paretic who had been given a moderate dose of salvarsan, at intervals of three or four days. After nine treatments, the patient had developed a very severe form of exfoliative dermatitis which resulted fatally. In his own work, he had practically given up the use of neosalvarsan, as skin rashes were apparently much more common after its administration than after the old salvarsan. Frequently the drug was given in too large initial doses and the intervals between doses was often too short. With moderate doses of old salvarsan, skin rashes were comparatively rare.

Dr. FORDYCE reported a case of 3rd nerve paralysis, which followed shortly after the injection of alcohol near the supra-orbital notch for a persistent neuralgia. The paralysis has persisted for several months. The patient was sent to him for an opinion as to whether the condition might not be due to a syphilitic meningitis. He had made a Wassermann test, which was negative, and suggested the advisability of a lumbar puncture to clear up the diagnosis.

Dr. MacKEE reported a case that illustrated an interesting and instructive radio-therapeutic complication. The patient was a physician who had an attack of acute psoriasis limited to the palms and backs of the hands, and the dorsal and plantar surfaces of the feet. No relief had been obtained by the use of various local applications. In fact, the skin appeared to be so sensitive to irritants that he was unable to tolerate even mildly stimulating applications.

Each of the four surfaces mentioned was then given an intensive X-ray treatment. As a result of this measure, the lesions disappeared. There was no X-ray reaction,—i.e., erythema of the normal skin, although the psoriatic lesions themselves did show very mild reactions.

Within a few weeks, the lesions returned, and the patient's condition was

the same as in the beginning. He was then given another X-ray application. This time, however, there was no improvement in the disease, nor was there the slightest X-ray reaction.

Three weeks later, the patient applied a 10 per cent. ointment of ammoniated mercury. This felt uncomfortable, and was removed. He then obtained a 20 per cent. oil of cade mixture, which he applied by means of gauze saturated with the tar combination. This was applied at bedtime to the backs and palms of the hands. During the night his hands felt very hot and uncomfortable, and a second application of the tar was made. After a sleepless night, the hands were found to be enormously swollen. There was a deep œdema, but very little, if any, increase in the dermatitis or inflammation. The intense swelling lasted for several weeks, and gradually subsided. At no time was there any vesiculation, ulceration, or severe dermatitis.

Dr. MacKEE thought that this result was caused by the strong tar mixture acting upon a skin which had been made hypersensitive by both the psoriasis and the X-ray. He felt certain that it was not an X-ray reaction. It was a well-known fact, he said, that tar, mercury, iodine, chrysarobin, pyrogallie acid, and other irritating drugs, when applied to the skin before an X-ray treatment, materially enhanced the effect of the X-ray. Also, if these chemicals were applied, even weeks,—in some cases, months,—after an intensive X-ray treatment, the skin would react severely and promptly. For this reason, when applying such drugs to the skin after X-ray treatment, the toleration of the parts should be ascertained by the use of very weak solutions or ointments.

NEW YORK ACADEMY OF MEDICINE, SECTION ON DERMATOLOGY.

Regular meeting, Dec. 2, 1913.*

WILLIAM B. TRIMBLE, M.D., *Chairman.*

DERMATITIS EXFOLIATIVA FOLLOWING PSORIASIS. Presented by
Dr. WALLHAUSER.

The patient was a man, 26 years old, born in the United States. He came under observation about 7 months ago, suffering from an acute generalized dermatitis that followed a strong application of resorcin in olive oil. The exfoliation gradually developed as the inflammation subsided and had continued ever since, although a marked improvement had occurred during the last four months, and healthy islands of skin were developing in various locations. His general condition was markedly affected; with the onset of the dermatitis he lost 26 pounds, was greatly depressed, and suffered from a feeling of chilliness, the slightest draught causing decided chills. With the improvement in the condition of the skin, this symptom of chilliness had entirely disappeared and he had about regained his original weight and good physical condition.

Dr. Lusk recalled a case of idiosyncrasy to resorcin, in which an extensive eruption was caused by the application of a lotion containing one half of one per cent. of the drug.

* The transactions of the November meeting of the Section will be published in the July issue.

TUBERCULOSIS OF THE MUCOUS MEMBRANE OF THE CHEEK. Presented by Drs. MacKEE and WISE.

This patient was presented at the December, 1913, meeting of the New York Dermatological Society.

Dr. TRIMBLE said that the prognosis was generally very bad. The patients usually died in about a year or a year and a half. The duration of six years in this case was very unusual.

Dr. GOLDENBERG agreed with the diagnosis and added that it was most unusual for such a lesion to persist for six years without pain and without yielding to treatment with tuberculin.

EPITHELIOMA TREATED WITH X-RAY. Presented by Drs. MacKEE and WISE.

This patient was presented at the October, 1913, meeting of the New York Dermatological Society and reported in *THE JOURNAL* for February, 1914, p. 149.

Dr. CLARK congratulated Dr. MacKEE on the result he had obtained in this case. He said that the single dose method was much better than the graduated dose method previously employed, which often left out-lying cells which were stimulated rather than killed and in which recurrences were the rule. With the single dose method recurrence was rare. He preferred to give an exposure sufficient to cause a local burn of the second degree.

Dr. GOLDENBERG asked if it was ever necessary to repeat the treatment when using the single dose method and if so, at what interval this was done.

Dr. MacKEE replied that it was sometimes necessary to repeat the dose, but never before four or six weeks had elapsed, as otherwise there would be an accumulative action.

NÆVUS UNIUS LATERIS. Presented by Dr. CLARK.

T. De M., 11 years old. Born in Italy. This patient showed the comparative results of the Kromayer light and CO₂ snow in the treatment of nævus unius lateralis, the lesion on the neck and sub-mental region having been treated by carbonic snow by Dr. Aitken, of the Skin and Cancer Hospital, and the area on the left side of the chin, below the left angle of the mouth, having been treated by exposure to the Kromayer light. Two applications had been made, the last and most effective one being a prolonged exposure such as the speaker would use in a deep-seated lupus vulgaris, for instance.

Certainly, most of the lesions had been removed by the light exposure and it would seem possible that even more prolonged exposures might be followed by a very satisfactory result in this condition.

The speaker thought that lupus erythematosus required long exposure, longer than one minute and advised the use of the blue filter, as the red rays, which produced dermatitis quickly, were thereby excluded. He advised an exposure of 25 to 35 minutes with the blue filter, using firm pressure. He knew of nothing else so effective in the treatment of nævus vasculosus.

EPITHELIOMA APPARENTLY DEVELOPING ON AN OLD LUPUS ERYTHEMATOSUS, HEALED BY RADIUM. Presented by Dr. CLARK.

Mrs. T., 67 years old. For many years the patient has had more or less lupus erythematosus, scattered on her forehead and face. Fifteen years ago, she had a "sore" cut out on her lip near the left side of the nose. One and a half years ago a papule appeared and grew rapidly into a soft granulating mass. For some months it apparently ceased to grow, but latterly it had begun to increase again

in size. When first seen the lesion was a soft, considerably raised granular-looking mass on a deeply indurated base and with a few firm, typical pearly nodules along the edge. Altogether, the lesion was the size of a silver half dollar. This patient had a similar soft, considerably raised epithelioma on the right side of her neck also. Because of the deep, indurated character of the lesion on the cheek, the speaker did not quite know how to judge his dose and it was necessary to use the radium several times with intervals of short duration, until he could get the reaction wanted; but the lesion on the neck had apparently been completely removed after one application, it being easier here after his experience with the lesion on the cheek, to judge the time necessary for a single dose sufficient to eradicate the lesion.

EPITHELIOMA OF THE SKIN TREATED BY RADIUM (SINGLE DOSE METHOD). Presented by DR. CLARK.

Mrs. R., 45 years old. The patient first had a "pimple" on the left cheek 2 years ago; she scratched it and a scab formed on it. This scab would fall off occasionally and the lesion would bleed. This lesion has been curetted twice, followed immediately by silver nitrate cauterization in the last 18 months, with a relapse in both instances, a few months after the cauterization. When first seen, 7 months ago, the patient presented a superficial scabbed lesion, with pearly hard, typical edges, a little larger than a ten cent piece. After a single application of radium, this lesion healed, except for a slightly raised edge along the upper border which apparently had not been included; this area was then exposed after the single dose method, followed by healing, and up to the time of presentation there has been no relapse.

The speaker said that he used a cell containing ten milligrams of radium bromide, purchased through Lehmann & Co. Although the cell was quite small it was possible to treat a considerable area by building up a hollow cone over the lesion and placing the tube at the apex. He considered radium at least as efficient as the X-ray if used after the single, prolonged dose method, because of the constant amount and character of rays emitted, and therefore the less liability of producing a radiodermatitis, the convenience of its application, such as at or near the inner canthus of the eye, and the fact that the cell could be fastened by strapping on and the patient allowed to go about at will or even take a nap; in one instance, the cell was left in place over night, demonstrating its portability. Radium would seem to possess certain advantages over the X-ray in the treatment of skin cancers. The cosmetic result was certainly excellent.

ERYTHEMA INDURATUM. Presented by DR. BECIET.

Miss J. K., 19 years old. The patient had had three outbreaks of her eruption. The first one began two years ago, lasting four months. After remaining entirely away until eight months ago it again appeared, and after lasting several months, it entirely disappeared. This attack began four weeks ago, first as large nodular swellings of a purplish color, some of which broke down, with resulting ulceration. She presented for examination a large number of nodular lesions of a dark red and violaceous color, many of which had broken down into small, rounded, punched-out ulcers. The eruption was almost entirely confined to the calves of both legs. The Wassermann reaction was negative.

Dr. GOLDENBERG said that in view of the relapses, the possibility of a bromide eruption was to be considered.

CASE FOR DIAGNOSIS. Presented by DR. TREMBLE.

Mrs. M. L., 41 years old, married, was moderately alcoholic. The skin had previously been clear. She took large doses of "bromo-quinine" for a cold, then she

had a sudden, profuse outbreak of intensely itching bright red papules, brownish on the legs. Some were acuminate, some flat, some umbilicated. There was moderate scaling, the scales separating in some lesions first at the centre, in others at the periphery.

DR. GOLDENBERG said that the lesions on the wrist were those of lichen planus, but that the eruption on the palms and face were very suggestive of syphilis.

DR. POLLITZER said that it was probably acute lichen planus. The extent and intensity of the eruption on the face were very unusual, but the diffuse and intense redness of the face might have been due to an underlying seborrhœic eczema. The lesions on the palms were not those of lichen planus but evidently syphilitic in character.

WARTY LESION OF THE CHEEK. Presented by DR. TRIMBLE.

MR. S. J., 53 years old, was born in Austria. Occupation, tailor. The disease appeared five weeks ago, involving the left malar eminence. The patch was smaller than a quarter of a dollar and larger than a ten cent piece, of rather warty appearance, and consisted of closely crowded elevations on a base which was red or dark red in color. The Wassermann reaction was negative.

DR. AITKEN said that he regarded this as a circumscribed herpes. There was no verrucous condition, all the lesions visible being superficial and vesicular.

DR. MACKEE agreed with Dr. Aitken that the lesion consisted of coalesced vesicles.

DR. POLLITZER said that the lesion was vesicular but not a herpes as that would not persist for five weeks. He suggested the possibility of a herpetic ringworm.

DR. LUSK said that this was probably not ringworm because it had not spread since the onset and showed no clearing in the centre.

DR. TRIMBLE said that the spot had remained unchanged for five weeks and that an ordinary herpes, it seemed to him, should have healed in that time.

SYNOVIAL LESION OF THE SKIN (?). Presented by DR. WISE.

MRS. K. F., 30 years old. Seven months ago a small papule appeared over the last joint of the right little finger. This spot bled very freely at all times and looked like a little mound of "proud flesh." About 3½ months ago, the little tumor and the underlying skin were excised. The wound healed by first intention. Shortly after, the same growth recurred. If left alone, small quantities of pus gathered in the nodule and pus and blood could be squeezed out daily.

The diagnosis of granuloma pyogenicum was considered but was rejected on account of the relapses after deep and wide excision; but as the growth was evidently in connection with the synovial membrane of the joint, the diagnosis of "synovial lesion of the skin" (as described by Ormsby in the November issue of THE JOURNAL) was considered probable.

DR. GOLDENBERG said that this was probably granuloma pyogenicum and that the position over the joint was accidental. It differed from the cases described by Dr. Ormsby inasmuch as it did not show the peculiar gelatinous or syrupy liquid which he found in his cases. He had seen granuloma pyogenicum relapse after deep incision.

URTICARIA PERSTANS. Presented by DR. WILLIAMS.

MR. G. S., 73 years old, was born in Germany. Married. He had always been well, until four years ago this Winter, when he began to have pains in the back and was in bed for three weeks. Immediately after the rash appeared and had been present ever since, with very little change. There was intense itching at

night, but little during the day. The eruption involved the back of the trunk as high as the lower ribs, extending nearly to the axilla on the sides. In front, there was slight dryness and thickening over the pubes, extending along the linea alba to the navel. On the forearms, the external and posterior radial surfaces were involved. On the lower extremities the eruption was general, except for the soles of the feet, a patch about three inches in diameter over each trochanter, and the upper third of the antero-internal surface of the thighs. The affected surface was dry, harsh, and thickened, and the lines of the skin were exaggerated. There were many excoriations from scratching, and many scratched papules. There were no large papules which had not been scratched. The eruption was worse on the legs, where it first appeared.

PRURIGO NODULARIS. Presented by DR. WILLIAMS.

Miss S. O., 25 years old. She was in the New York Skin and Cancer Hospital for four months, about two years ago, with a similar attack, but more severe than any which had developed since. There were no attacks before that time. During the first attack, pustules or boils were said to have been a prominent feature. The patient stated that any injury to the skin was followed by the formation of a callous spot. The eruption consisted of firm papules about a quarter of an inch in diameter, pink or gray in color, with roughened surface, and sometimes slightly depressed in the centre. There was no scarring. The patient stated that sometimes a papule would flatten out and that later it would reappear on the same spot. The patient was anemic and tired easily, and was subject to headaches and to drowsiness in the afternoon. The constitutional symptoms had been relieved by diet and intestinal antiseptics; the itching continued.

DR. POLLITZER objected to the term *urticaria perstans*, which had been used for a very great variety of diseases. He preferred *prurigo nodularis*. The eruption in the woman may have been either that disease or *lichen corneus*, the extensive distribution and the rough, horny surface favoring the latter diagnosis.

DR. GOLDENBERG said that the patient showed, in his opinion, a typical case of *lichen chronicus hypertrophicus*. The woman resembled somewhat the cases pictured in the *Ikon. Dermat.*, but her lesions were of larger size and apparently did not itch as much.

REPORT OF PROGRESS OF A CASE OF SCLERODERMA. Presented by DR. GILMOUR.

Mr. J. N. was previously exhibited on Oct. 7, 1913. Ten days previous to his death, the patient was troubled with his breathing and again had the same symptoms two or three days before his death. He complained of a shortness of breath as if he had hurried upstairs. On Nov. 26, 1913, the patient was at work as usual. He returned home, ate a good supper and retired at 9 p.m. At 12 midnight the patient walked into his son's room and said, "I want to be fanned." The breathing was quick and short. There was a wheezing, as if breathing were a great effort. The doctor who immediately responded to the call told the speaker that it was at once evident that the patient would die, and that there was a spasmodic contraction of all the chest muscles. He believed the cause of death was due to "a tightening of the chest brought about by the scleroderma." The doctor in attendance talked over the case with a well-known internal medical man who had previously seen the case, and pulmonary oedema was the diagnosis agreed upon for the death certificate. The heart beat could be heard with the phonendoscope five minutes after the respiration had ceased. The patient died at 12.30 a.m., one half hour after his attack began.

MANHATTAN DERMATOLOGICAL SOCIETY.

Regular Meeting, December, 1913.

L. OULMANN, M.D., *Chairman*.

MULTIPLE ANGIOMATA. Presented by DR. OCHS.

The patient, Lydia S., aged 2 years, presented four angiomas, one situated on the sole of the right foot, about the size of a ten-cent piece; another on the outer side of the right thigh, also of the same size; a third, about the size of a fifty-cent piece, which was elevated, on the outer side of the left arm, close to the shoulder and a fourth on the left labia majora. This last one almost took in the entire labium, was elevated and dark red in color. The one on the sole of the foot was healed with but one application of the solid carbon dioxide snow. That of the thigh, in three applications, while that of the arm had had six applications and that of the labium was still under treatment, having had six applications of 15 minutes each. It had grown very much smaller and was pale pink in color. Marked cicatricial tissue was causing the angioma to become decidedly smaller.

DR. GORTHEIL said that purely cavernous angiomas, or mixed cases with a cavernous basis were very unsatisfactory ones to treat, since the deep sinuses could hardly be affected, and there was always danger of thrombus formation. He had gotten satisfactory cosmetic results, however, in some cases, by using solid carbon dioxide snow repeatedly, so as to cause the deposition of successive layers of new connective tissue over the tumors, whitening them and causing shrinkage through pressure. Operative procedures to cause coagulation in the deep vessels, especially hot water injections, though not devoid of danger, were indicated.

KERATOSIS PALMARIS ET PLANTARIS. Presented by DR. PAROUNAGIAN.

The patient was a boy, 12 years old, born in the United States. He was seen at the Gouverneur Clinic. According to the patient's history, the affection on his hands and feet began three years previously. The lesions were symmetrical, involving the palmar surfaces of the hands and plantar surfaces of the feet. They were verrucous patches, fissured, some of the fingers and toes being involved. Most of the lesions were situated at the plantar arches. The patient complained of considerable itching. His lips were hypertrophied and he had a typical "scrotal tongue."

DR. WISE agreed with the diagnosis as presented.

DR. PISKO said that a Wassermann test ought to be taken of this case to see if it were syphilitic.

DR. OCHS said that he hardly thought this case to be one of a syphilitic nature and regarded it as a psoriasis. He stated it looked very similar to a case of palmar psoriasis he had presented to the Society some months previously.

DR. PAROUNAGIAN, in closing the discussion, said that at first he hesitated between the diagnosis of eczema and keratosis on account of the history of the duration, but after careful examination he was in favor of the diagnosis of keratosis. As regarded the diagnosis of heredo-syphilis, he could find nothing to justify that diagnosis; he said the boy was well developed, did not have Hutchinsonian teeth; the itching and symmetry were all against syphilis. A Wassermann test was made on this patient after presentation, December 11th, 1913, and was "doubtful, probably negative."

CASE FOR DIAGNOSIS. Presented by DR. BECHT.

R. O., a female child, was $4\frac{1}{2}$ years old. The eruption had begun five weeks previous to presentation, as a single lesion on the right shoulder blade. Within a day or so, similar lesions appeared all over the back. For the three weeks previously, there had been no extension. She presented for examination a large number of sharply margined, oval lesions, quite scaly in character, many of which were confluent, forming several large serpiginous patches. Several of the lesions consisted of rings within rings. A number of them showed a yellowish, slightly scaly centre. Scrapings of epithelium failed to show a fungus. The case was presented for a differential diagnosis between pityriasis rosea and tinea circinata.

DR. McMURTRY said he did not think it was a case of ring worm.

DR. OULMANN said that he thought it was a case of pityriasis rosea.

RHINOPHYMA. Presented by DR. GOTTHEIL.

The unusual feature of the case, a male adult, was the limitation of the enlargement to the central lobe almost entirely; generally the alæ were as much or more involved. The speaker regarded these cases as benign adenomata, on account of the microscopic findings and the fact that they usually grew again after removal. On account of the enormously dilated and infected sebaceous glands, it was impossible to get a clean operation wound, and removal of the entire affected skin down to the cartilage was required. One very bad case of his own had been operated on no less than four times, once by himself and three times by well known surgeons; yet each time the growth returned, and the patient finally died with the rhinophyma larger than ever.

DR. OULMANN said that he saw a picture in Nagelschmidt's new book on diathermy, which showed an excellent result in a case of rhinophyma, after treatment by this method.

RHINOPHYMA. Presented by DR. OCIS.

The patient was a male adult, 57 years of age, who presented a rhinophyma of 15 years' duration. He had had an active rosacea for 30 years. At the time of presentation he showed two large pendulous masses on the left side of the nostril with great enlargement of the sebaceous glands. The growth had grown but little up to about 3 months previously, when it suddenly began to increase rapidly and became very large.

CASE FOR DIAGNOSIS. Presented by DR. GOTTHEIL.

The patient, a male aged 50, had suffered from his affection for 8 years, the hands and lower forearms being chiefly affected, with a few lesions on other parts of his body; at times he had been very much better or nearly well. A seven-inch plaque around the umbilicus and some smaller lesions on the backs of the arms and on his back showed all the characters of a psoriasis of the seborrhæal type; but on the hands and forearms the condition looked entirely different. With the exception of the lower half of his right index finger, the skin and nail of which was entirely normal, the skin of both sides of the hands and some five inches of his lower forearms was very greatly thickened, reddened and acutely inflamed. The edges of these areas were absolutely sharp, elevated and markedly verrucous, and this edging was equally marked at the middle of the right forefinger, where the normal skin began. The nails of all his fingers, with the exception of the one above mentioned, had been lost, and the exposed nail beds were in the same condition as the rest of the skin of the hands. Over the entire area were innumerable, small, apparently superficial abscesses, and there were many of these in the elevated margins above referred to. His toes and feet were very slightly affected with an inflammatory process similar to that on the hands, but no nails had been lost.

Blastomycosis was of course suspected, but a most careful microscopical and cultural examination failed to reveal its presence; only the ordinary picture of a chronic inflammation of the skin was seen and the microorganisms present were the ordinary pus cocci. The lesions on the body responded well to anti-psoriatic medication of the usual kind; but the hands did badly until slight improvement occurred under a mild salicylic-alcohol lotion. It may be added that the X-ray revealed what the radio-diagnostician claim to be atrophy of the terminal phalanges of the affected fingers.

The condition of the hands could hardly be considered psoriatic; the diagnosis of pyoderma was an unsatisfactory one; and though the condition looked like a parasitic affection, no special microorganisms had yet been found. Further and more elaborate cultural experiments were being made to be reported on later.

DR. SATENSTEIN said that the microscopical picture was rather peculiar inasmuch as it did not show any change in the connective tissue. All that could be seen was a small round cell infiltration of the epidermis and subpapillary region, and around the hair follicles; the papillæ were lengthened and narrowed and the interpapillary plugs broadened and deepened; in other words, the findings of a chronic dermatitis; no parasites were found.

ULERYTHEMA SYCOSIFORME? Presented by DR. McMURTRY.

The patient was a male adult and came to Dr. Fordyce's clinic the Wednesday previous to his presentation and presented a condition resembling the rare affection of ulerythema sycosiforme. There were some lesions on the cheeks and neck which were of a folliculo-pustular character, and grouped around a dollar-sized area of white scar tissue. This was suggestive of a lupoid sycosis. No diagnosis could be made with certainty because of the fact that the patient had been treated with the X-ray. It was a question as to how far the X-ray burn could be distinguished from the cicatricial tissue due to the folliculitis. There were also a few lesions on the forehead. The patient, one day after shaving himself, noticed small "pimples" appear. Since then the "pimples" had become grouped, chiefly on the right cheek. The area tended to spread at the borders, leaving scar tissue in the centre, but part of the scar tissue might have been due to two series of X-ray treatments, hence the doubtful diagnosis.

VERY EXTENSIVE CONDYLOMATA ACUMINATA. Presented by DR. GOTTHEIL.

The patient was a female, aged 40, who had had five salvarsan and four mercurial injections before admission to the City Hospital, from various physicians, without effect. The entire vulva, including both surfaces of the labiæ majora and minora were occupied by a great fungating papillary mass, intensely tender and bathed in a foul ichorous discharge. Gonococci were present. Ablation was advised.

DR. SATENSTEIN said that though these lesions were present for the past eight years they had become painful in the last few months only. The speaker suggested a possible myxomatous degeneration of the condylomata. Microscopical examination of the lesions (taken later) showed a papilloma upon an angiomatous base; no evidence of malignancy or degeneration was present.

ATHEROMA MULTIPLEX. Presented by DR. KINGSBURY.

This woman, who was recently shown at one of the meetings of New York Dermatological Society, was 52 years old. The lesions had been present on the face and vulva for the past seven years. The larger lesions were to be found on the labiæ majoræ, many of them having attained considerable size.

NÆVUS VERRUCOSUS. Presented by DR. OCHS.

The patient, a male negro adult, came to the Harlem Hospital Dispensary two days previously for an examination for lues. He had infected himself some

seven years previously, and Dr. Fox had put him through the Wassermann test, which was "four plus." On examination, there were found on the body of the penis two verrucous growths, and the speaker said he did not know whether to call them simply papillomata or *nævus verrucosus*. The one lesion situated on the dorsum of the penis, was about three-fourths of an inch long by one-fourth of an inch wide, black, slightly elevated and sharply defined. The other was situated at the root of the penis, dark in color, presenting a warty surface and was about one-half inch wide and one-fourth inch long. The patient was unable to say how long they had been present.

EPITHELIOMA SERPIGINOSUM. Presented by Dr. OULMAN.

The patient was a male adult, 40 years of age, whose lesions were of fourteen years' standing. They were mostly on the forehead but existed also on the cheeks, in the inner canthus of the eyelids and behind the left ear. There were some scars present of former ulcerations and on the cheeks mostly dry patches, some scaly or covered with a thin crust, while at other places they were more or less deeply ulcerated. The lesions were very itchy, especially when they broke out. At the left inner canthus the small ulcer caused an ectropion and constant lachrymation.

TERTIARY ULCERATIVE SYPHILODERM OF THE HEEL, ACCOMPANIED BY SUDDEN BLINDNESS. Presented by Dr. GOTTHEIL.

Mrs. Ida L., age 56, gave no history and showed no signs of past syphilis other than those recorded in the title. Six years ago, without ascertainable cause, she became suddenly and completely blind; she was treated in an excellent eye clinic without avail. Further details of this blindness were unobtainable. Eighteen months ago she began to have trouble with her left heel, which had persisted ever since and extended in spite of the varied treatment to which she had been subjected. The skin lesion was evidently a tertiary gummatous ulceration and her blood reaction was "four plus." The interesting point in this case was the sudden amaurosis, probably syphilitic, the likelihood of its non-recognition, and the appearance, four and one-half years later, of the first signs of infection in the skin, also unrecognized for over a year. The treatment was salvarsan intravenously and mercury intramuscularly; her ulcerations were healing rapidly, but her eyes, of course, had not been benefited.

ANNULAR SYPHILODERM. Presented by Dr. OCHS.

The patient, an adult negress, showed one single lesion at the side of the neck. It was an annular lesion; except for the fact that she had condylomata, she showed no other lesions of syphilis. The case was presented to show annular syphilis presenting but one single lesion. Usually the annular type showed many such lesions over the face and chest.

HERPES ZOSTER OF THE TRIGEMINUS WITH SCARRING AND ATROPHY. Presented by Dr. OULMAN.

The patient, Mrs. N., was 72 years old and had never had any skin diseases except that a few years ago she had a few blisters on the inner canthus of the right eye and right side of the nose. The eye and the entire adjacent region was swollen. The patient had no pains. After this, there were a number of red spots on the forehead reaching over the entire right side of the scalp, which became covered with crusts. For about a year the skin of the right side became thinner. When the speaker first saw the patient, about three months previous to her presentation, the area was covered with senile seborrhæic warts which were removed by salicylic vaseline. The skin supplied by the first branch of the trigeminus was atrophic and the speaker supposed that the first lesions were herpes zoster. The skin of the scalp was tense, and on the nose could be seen atrophic lesions, sharply defined on the left side.

TUBERCULOSIS VERRUCOSA CUTIS. Presented by DR. BECHET.

This patient was from the service of Dr. Kingsbury at the Skin and Cancer Hospital, a male, 24 years of age, and a resident of the U. S. for three years. The disease began fourteen years previously on the nose and index fingers of both hands. He presented on examination large, raised, dry verrucous masses, involving the greater part of the index fingers of both hands. The little finger of the right hand and right side of the palm were also involved. On the left ala of the nose was a scar from a previous successful operation for the removal of a patch of the disease.

PEMPHIGUS. Presented by DR. OULMANN.

Mrs. J. W., 40 years old, had had malaria four years ago for about seven months. At that time she took large doses of quinine and her legs became covered with lesions which looked like small pox. She married three years ago and suffered for the past two years with rheumatism. Since that time she was under treatment and took all kinds of medicines. Two months ago she developed some blisters in both axillæ, after taking some new medicine. Shortly afterwards, she went to the German Dispensary for her rheumatism, where her blood showed a positive Wassermann. She received injections in the orthopædic department. During that time, more blisters developed in the mouth, on the arms, legs and on the trunk. The blisters developed on non-inflamed skin, broke down very quickly, formed crusts and were extremely itchy. The speaker saw the patient two days previously for the first time. Besides a placebo, she took prolonged hot baths which gave her much relief from the itching. New blisters broke out since she had been seen for the first time; they were of different sizes. Whether this were a pemphigoid eruption, or a true pemphigus, or a dermatitis herpetiformis, Dr. Oulmann could not definitely decide.

Dr. Pisko said he thought this case was one of Duhring's disease because the lesions were seen coming out in groups and some were true bullæ, and that although Duhring's disease could be applied to a number of other such affections, he thought it suited this case particularly well. The eruption had a distinct inflammatory base and the speaker said he would not call it pemphigus.

Dr. Gottlieb would not apply the term pemphigus to these benign cases of bullous eruption, lasting so very long and entirely unaccompanied by constitutional symptoms; he regarded them either as instances of dermatolysis or of a bullous variety of dermatitis herpetiformis.

TUBERCULIDES. Presented by DR. PAROUNAGIAN.

The patient was a male adult, 24 years of age, born in Russia and a clerk by occupation. His father was dead, cause unknown, the mother and two brothers were living, two sisters having died in infancy. The patient had had no serious illness, and was apparently in good health. His present trouble began about eleven months ago. The lesions were purplish, necrotic papules, scattered nearly all over the body. Favoring the extensor surfaces of the extremities, scattered lesions were noticeable on the ear, backs of the hands and buttocks. Some of the lesions were still active, others in the stage of involution, leaving dark bluish scars. The patient had no subjective symptoms and had been under the care of the speaker for the past four months and improved greatly under tonic treatment and locally white precipitate ointment.

TUBERCULOSIS OF THE TONGUE. Presented by DR. MACKEE.

The patient, a man of 48, was from Dr. McMurtry's service in Dr. Fordyce's clinic. There was a dime-sized ulceration involving the tip of the tongue from which tubercle bacilli had been obtained. The ulcer presented a ragged outline and a slightly undermined edge; there was very little pain; there was no indura-

tion. The Wassermann reaction was negative. The duration was 8 months. The patient was affected, also, with tuberculosis of the larynx and lungs.

Dr. GEORGE HENRY FOX showed a photograph which he had taken in 1874, and said it showed the exact duplicate of the case Dr. MacKee had presented. He added that such ulcerations on the tip of the tongue were usually not syphilitic in nature, but tuberculous.

Dr. Pisko said these tuberculous lesions were quite soft and he thought they had a slimy base.

Dr. McMURTRY said that the differentiation between tuberculosis and epithelioma was that the latter usually occurred on the sides of the tongue and was irritated by contact with decayed teeth. Tuberculosis of the tip of the tongue was not uncommon as the consumptive patient used that part mostly in expelling the sputum in spitting. Tuberculosis of the tongue was inclined to show a dirty and a soft base, with a grayish slough, whereas epithelioma of the tongue had a distinct sense of resistance or induration due to the production of masses of more or less completely keratinized cells.

ALOPECIA AT BACK OF NECK. Presented by Drs. MacKee and Wise.

The patient, a man of 27, was from Dr. Fordyce's clinic. He presented a slight, mottled alopecia of the back of the neck. The moth-eaten appearance suggested a syphilitic origin.

PSORIASIS LIMITED TO THE PALMS FOR OVER THREE YEARS.

Presented by Dr. GOTTHEIL.

The patient was a physician, aged 30, and had suffered from a circinate eruption of the palms, with less extensive lesions on the soles, for over three and a half years. Local medication of various kinds gave him no relief; the affection spread very slowly but continuously. When the speaker first saw him in the early Summer of last year the affection looked most like a secondary syphiloderm; yet there was no history or other evidence of lues and his Wassermann was negative. The most varied local treatment was useless; and as the circinate red lesions of the palms were still spreading, and the extension of the disease threatened to entirely incapacitate the patient, he was given several salvarsan and mercurial treatments, without in any way bettering his condition. He then consulted Dr. Fordyce, who regarded the affection as being an eczematoid ringworm of the type lately described by French and English dermatologists. The biopsical findings did not confirm this however; nor did treatment in this direction do him any good. Finally, in the Fall, he went to Dr. MacKee; there was then a new lesion distinctly psoriatic, on one lower forearm, and the diagnosis was readily made. The treatment instituted was the X-ray in massive dose; his affection got almost entirely well, but returned as badly as ever in a very short time. There was some further ray treatment; but the patient got rapidly worse, and became entirely incapacitated; he gave up his practice in the country and came to town to the speaker again. He was given extremely mild tar oil applications, but got worse under them. At the time of presentation he had a dermatitis of both hands that prevented his using them at all and robbed him of his sleep. The treatment was boric acid wet dressings and an almond cream which the patient had gotten from Dr. Dearborn. His condition was very slowly improving. Dr. Gottheil was not attempting to do anything for the few psoriatic lesions that he had elsewhere, save for a very weak rhubarb salve, under which some of them had disappeared.

SYCOSIS WITH PAPILLARY LESIONS. Presented by Dr. HOWARD FOX.

The patient was an Italian, 53 years of age. He stated that he had suffered from an eruption of the bearded portion of the face for twelve years and of the scalp for about two years. The eruption of the bearded region had been treated

by the X-ray for six months at the Post Graduate Hospital. He had had a discharge from the nose for three years. The patient presented an alopecia of the bearded region, a rhinitis and a blepharitis. The unusual feature of the case consisted of moderately infiltrated, roughened, dry patches upon the temporal region and forehead, extending upon the scalp. The usual color and scarring of lupus erythematosus were absent. Upon the lower occiput were closely crowded follicular lesions with irregular, mostly pinhead sized papillary elevations, suggesting a dermatitis papillaris capillitii. Upon both hairy and non-hairy parts, the eruption seemed to be a pustular folliculitis with the production of keloidal lesions, chiefly upon the scalp.

Dr. Mount, after presentation of the cases, showed a photograph of a female adult, who was given, by a druggist, corrosive sublimate instead of white precipitate powder. She made an ointment with the same and after an application to the scalp lasting two hours, lumps appeared. In twelve hours there was diarrhœa, and twenty-four hours after, the gums were swollen and there was salivation. Dr. Mount's examination was made about two weeks later; the patient showed nineteen irregularly shaped, necrotic ulcers on the scalp. The gums were sore, swollen and bleeding.

REVIEW OF DERMATOLOGY AND SYPHILIS.

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ARCHIV FÜR DERMATOLOGIE UND SYPHILIS.

(July, 1913, cxvi, No. 3.)

Abstracted by JOHN H. STOKES, M.D.

ON THE QUESTION OF EXPERIMENTAL THALLIUM ALOPECIA. A.
BUSCHKE, p. 47.

The writer discusses the work of Pohlmann (*Arch. f. Dermat. u. Syph.*, cxiv, No. 3) on the production of alopecia in rats and mice by the feeding of thallium acetate, in the light of his own investigations of the subject, calling attention to

the following particulars. (1) Pohlmann found it possible to produce only an alopecia affecting the dorsal regions of the animals, whereas Buschke himself had in a previous publication called attention to the fact that he had produced both dorsal and ventral alopecia in rats, though not in mice. The earlier return of the hair on the ventral surface showed the dorsal to be predisposed. (2) Buschke also had failed to find any spectroscopic evidence of the presence of thallium in the affected skin. (3) Buschke is unable to sustain the contention of Heller, that necrotic changes occurred in the affected skin. Heller used material obtained from Buschke, which had been preserved only with a view to macroscopic demonstration, and which had lost its nuclear staining properties to such an extent as to simulate necrosis. (4) Finally, while he still feels that the action of thallium in the production of alopecia is primarily central, Buschke is now more inclined to consider that it may also have a peripheral influence, as a result of his observations upon the production of cataract of a senile type in rats, by the feeding of thallium salts.

ON THE CULTIVATION AND MORPHOLOGY OF THE LEPRO ORGANISM AND THE TRANSMISSION OF LEPRO TO APES. J. REENSTIERNA, p. 480.

The writer prefaces his account of his own investigations with a very interesting historical review of previous work upon the lepro organism and the transmission of the disease to experimental animals. Before presenting his results, he states frankly that at the time he undertook the studies which he reports he was unacquainted with the work of Duval in the cultivation of the organism through a number of generations and the demonstration of its identity with that described by Hansen and Neisser. Reenstierna's results are succinctly stated in his summary, which is briefly as follows: (1) He succeeded, both from leprous blood and excised tissue containing large numbers of typical bacilli, in obtaining growths of both acid and non-acid-fast organisms in fluid media. From the blood he obtained morphologically a streptococcal form, and from the tissues a bacillary form. (2) He isolated the acid-fast type by means of antiformin digestion and carried it through several generations. (3) The acid-fast organisms just mentioned presently lost their acid-fast character under cultivation. (4) The non-acid-fast pure culture of coccal forms from the blood showed from time to time the development of acid-fast streptococcal forms and also beaded bacilli. (5) One of the cultures from the leproma showed the development of a slimy mycelial network, non-acid-fast, in the meshes of which were found, however, also typical acid-fast bacilli. (6) The injection of leproma emulsion and material from the culture of both acid- and non-acid-fast types of organisms including the coccal form, into monkeys (*Macacus rhesus*) gave after a considerable incubation, results which are apparently positive, and which are described in detail. In all the cases except one, acid-fast organisms were recovered in the affected tissues. In one of the experiments, namely the injection of a specially isolated non-acid-fast streptococcal form, while the clinical picture resembled somewhat that of lepro, no tissue changes characteristic of lepro were found post-mortem, and a very variable non-acid-fast organism was isolated. The writer concludes from his observations and experiments that the lepro organism shows a strikingly polymorphous character, allying it in many of its cultural forms to the molds. He feels that it stands in close relation to the tubercle bacillus and subscribes to Kedrowski's point of view, that it may produce changes in the body scarcely to be distinguished from those given rise to by the Koch bacillus. He finally calls attention to the fact that the possibility of inoculating guinea pigs with the lepro organism invalidates this feature in a differential diagnosis, and feels moreover, that the use of specific culture media is also of doubtful value. There is a comprehensive bibliography.

CLINICAL AND EXPERIMENTAL STUDIES ON THE EFFECT OF ANILIN DYES ON HUMAN AND ANIMAL SKIN. O. SACHS, p. 555.

The first division of this article deals with clinical observations on this very important phase of industrial chemistry in its relation to occupational dermatoses. From a review of the work of other investigators, Sachs draws the conclusion that the commonest conditions arising in workers engaged in the manufacture and use of coal-tar dyes and the mordants employed with them, are dermatitis, eczema, acneiform eruptions, papillomata of the skin and epitheliomata, the last-mentioned being the least common. From his own observation the author then presents typical cases of dermatitis, eczema and papilloma, illustrating the action of the chemical and mechanical factors in the production of the lesions. The demonstration of crystals of dye in the papillomatous tissues especially, established the origin of the condition. Sodium salicylate internally and the use of wet dressings of the Liquor Burrowi proved an effective treatment. As prophylaxis, the thorough washing of the hands with soap and water and the use of an alcohol wash in 70% to 80% strength was recommended. Individual susceptibility or resistance to the action of the dyes undoubtedly plays an important part in the development of the dermatoses in certain workers and the immunity of others under the same conditions.

From a series of experiments on the effects of rubbing various dyes of the benzol, azo and alizarin groups into the unbroken skin of the rabbit's ear, and the study of the lesions produced, the writer concludes that these substances produce a proliferation of the rete malpighii and a marked hypertrophy of the sebaceous glands. It was observed incidentally that the effects of the dyes were more marked on albino or slightly pigmented skins. The absence of injurious effect from mixtures of Grünerlack and lanolin leads to the prophylactic suggestion that workers in fat-soluble dyes protect the exposed parts of the body by the use of an oily or fatty protective.

A third series of experiments on the injection into the skin of emulsions and solutions of anilin dyes in olive oil and other vehicles, appropriately controlled, led the writer to the conclusion that proliferation of the epithelium with epithelial cyst-formation and dilatation of the sebaceous glands were characteristic pathological changes induced by these agents. In the neighborhood of hair follicles the appearances closely resembled those of keratosis pilaris. The occurrence of giant and foreign body cells was also noted. It is also significant that pictures identical with the foregoing were obtained by the injection of olive oil alone, which substance the writer regards as having an effect in the skin very similar to that of the anilin dyes themselves. This observation is offered as a possible key to the origin of rhinophyma, the sebum masses acting as the exciting cause of the proliferation of the sweat glands. The extension of the observations made by other investigators on scarlet-red to the whole field of anilin dyes, and further to protein decomposition products such as skatol and indol, and to the fatty substances such as olive oil, opens a wide field to ætiological speculation. Among the possibilities the author calls special attention to those mentioned above and to the possible relation to malignant proliferation. Not the least interesting suggestion on this latter point is the parenthetical inquiry as to whether melanotic pigment in nævi may not have the ability to excite epithelial proliferation similar to that described for the coal-tar pigments.

The therapeutic conclusions, summarized, are, that the well-known action of scarlet-red on granulation tissues and epithelium is shared by other coal-tar dyes, and that of the other dyes experimented with, Brillantrot as a dusting powder or in an ointment of 10% strength, was markedly superior in promptness and rapidity of action, to scarlet-red.

ON CONGENITAL ECTODERMAL DEFECTS AND THEIR RELATION TO EACH OTHER: VICARIOUS PIGMENTATION IN PLACE OF HAIR. J. CHRIST, p. 685.

The writer describes a case of total absence of the sweat glands in association with a high-grade hypotrichosis and hypodontosis, occurring in a boy, aged thirteen years, who, although Wassermann negative, showed at birth unmistakable evidence of congenital lues, and at the time of examination had a definite *ozæna*, which was also present in three out of the four reported cases of this anomaly in the literature. The patient, while fairly comfortable when cool, experienced marked prostration and headache when warm, and was unable to make vigorous exertion. There was total absence of the sweat glands and of all hair except on certain regions of the scalp. The boy had only two teeth in the upper jaw, even the "Anlagen" of the others being absent. Another male child of the same mother was said to have presented a similar condition, and a second case is reported in a collateral female line. The luetic factor does not impress the writer as directly ætiological, since it has been absent in a number of cases of ectodermal defect. The report forms the basis for an interesting discussion of trophic influence in the development of hair and pigmentation of the skin, with numerous examples based on embryology and comparative anatomy. The influence of the trigeminal nerve receives special comment on account of the distribution of the hairy and hairless areas about the patient's scalp and face. Attention is also called to the relation between hair development and pigmentation illustrated by this case, the pigmentation and atrophy in the skin about the face being marked enough in the hairless areas to make a differentiation from *xeroderma pigmentosum* necessary. The relation of *ozæna* to ectodermal defects in pigmentation and hair development is also noted, with the suggestion that *ozæna* may be a form of abiosis and the expression of a tendency to atrophy which is inherent in the "Anlagen" of the structures affected. Finally the author calls attention to the coexistence of mental defect in the reported cases, with the cutaneous anomalies discussed, concluding that the common origin of the central nervous system and the skin from ectoderm may well be the basis for the correlations observed.

ACNE NEONATORUM. A. KRAUS, p. 704.

From observations in the pediatric clinic of Professor Epstein, the writer describes an eruption occurring on the faces of infants, especially on the forehead and about the nasolabial folds. Clinically this has been confused heretofore with miliaria, from which the author proceeds to differentiate it. He describes the process as involving the sebaceous glands, with comedo-like plugging of the ducts and follicles and cystic dilatation of the obstructed glands. The process is apparently foreshadowed in certain cases in intrauterine life, as found by examination of fetal material, the ætiological factor at this stage being in the author's opinion possibly a hormone in the maternal circulation. Kraus then, regards the process as a disturbance of function of the sebaceous glands, a *seborrhœa* forming the basis for a true acne of the new-born, practically homologous with the acne of puberty and early adult life.

ON THE NATURE OF THE SO-CALLED BOTTLE-BACILLUS OF UNNA.
A. KRAUS, p. 723.

In connection with the study of acne neonatorum reviewed above, Kraus examined in his serial sections the morphology of the bottle-bacillus of Unna, which he found in large numbers in the sebaceous material in the follicles. After reviewing the literature on this much-investigated organism he draws from it and from his own observations, the following conclusions:

(1) The bottle-bacillus is certainly not a schizomycete.

(2) Under the term "bottle-bacillus" are grouped two types of organisms: (a) a single bottle-form which is a true mold; (b) other forms of bottle-shaped organisms which are simply sporoid elements of a higher, filamentous hyphomycete.

SYPHILIS WITHOUT A PRIMARY LESION. R. POLLAND, p. 737.

The writer contributes the report of a case with discussion to the mooted question of the existence of syphilis d'emblee. His patient was an intelligent and educated army man who had exposed himself with one woman for a month prior to coming under observation. When the pair consulted the author, the woman was found to have a number of primary lesions on the labia and a beginning secondary efflorescence. The man had absolutely no lesions of any description on the genitalia or elsewhere, no adenopathy, no urethral discharge and a negative complement-fixation test. He was kept under close observation, and was not further exposed to the disease. About a week after consultation a transient, scarcely perceptible reddening about the meatus was noticed, which disappeared promptly without the slightest sign of infiltration or discharge. About a month later the first signs of inguinal adenopathy appeared, developing slowly the typical characteristics of the satellite bubo. Repeated Wassermann reactions during this time were negative. A typical maculo-papular secondary rash appeared about six weeks later, the disease running a typical secondary course with slight recurrent manifestations. The writer apparently feels the case to be one of true syphilis d'emblee, and makes it the basis for urging that suspected cases be kept under observation *post coitu* for longer than the customary four weeks—in fact until all possibility of an eruption of secondary manifestations is past.

DERMATOLOGISCHE WOCHENSCHRIFT.

(Nov. 1, 1913, lvii, No. 44.)

Abstracted by CHAS. GOOSMANN, M.D.

RESEARCH STUDIES IN PSORIASIS. JAY FRANK SCHAMBERG, JOHN A. KOLMER, A. J. RINGER and G. W. RAIZIES, p. 1283.

This is identical with their able article in *THE JOURNAL* for October, 1913.

LUPOID-LIKE SKIN DISEASES FOLLOWING SUBCUTANEOUS INJECTIONS. M. OPPENHEIM, p. 1289.

The cause of Boeck's lupoid is not positively known, although Kyrles and Volk have each produced inoculation tuberculosis in animals from typical cases. Oppenheim does not believe all cases to be due to the tubercle bacillus, and reports one case which followed repeated morphine injections (under aseptic precautions) in an habitué. Histologic examination eliminated the possibility of pyogenic infection, and showed the nodules to consist of epithelioid cells and a small number of giant cells, with peripheral disposition of their relatively few nuclei. Round cells were absent, and there was no tendency to form granulation or fibrous tissue; neither was caseation present. Stains for tubercle bacillus, as well as animal inoculation experiments, gave negative results. This case had been diagnosed variously as multiple abscesses, carcinoma and leucæmic tumors.

Two similar cases, of which one was biopsied, were sequelæ of mercury injections. The one developed five years subsequent to injections of mercury salicylate, the other a similar time after gray oil injections.

Clinically these three cases were identical. They began as painless subcutaneous nodules, palpable but not projecting. With increase in size they projected and became adherent to the skin, and showed a brown or bluish-red color. There was a characteristic lack of inflammatory reaction and necrosis, and a very slow spontaneous resorption seemed to be occurring.

(*Ibid.*, Nov. 8, 1913, lvii, No. 45.)

HISTOLOGIC STUDY OF A CASE OF IDIOPATHIC PROGRESSIVE SKIN ATROPHY (DERMATITIS CHRONICA ATROPHICANS). MENAHEM HODARA, p. 1307.

Hodara discusses the literature of acrodermatitis chronica atrophicans, and then gives in detail a clinical and histologic study in a man 55 years old. The disease began 15 years ago, on both legs, and now the nates, thighs, legs and dorsal surface of the feet are completely involved. There is a bluish-red erythema, with patches of lividity, and others of a bronze or black color. Most of the erythematous skin is thickened and sclerotic. On the legs are found erythematous areas with distinct atrophy. In some places the skin is furrowed in all directions, and covered with scales of various thickness. On the front of the leg the scales are small, thick, black in color, and easily removed; in other places they are gray, thin and bran-like or they may form broad, thin lamellæ.

There is also a symmetrical involvement of the upper extremities, on the front and outer side of the arms and forearms, as well as the back of the hands. The atrophic changes are more marked on the upper extremities than elsewhere.

Histologically, the early changes are inflammatory, with vascular dilatation, occasional thrombosis, endarteritis and endophlebitis. The collagen and elastic tissue of the cutis and subcutis is œdematous; the lymph spaces dilated. Later stages show cellular infiltration of the cutis, at first perivascular and perifollicular and finally diffuse. The infiltrating cells are of the spindle and plasma cell type and their accumulation is associated with atrophy and disappearance of the collagen and elastic fibers, as well as the follicles and glands. A few hyperplastic smooth muscle fibers persist. In some spots epithelioid cells are found, and when they occur in a closely packed group, there is some resemblance to a giant cell. The atrophy of the skin spreads from the surface to the deeper layers, and when the cutis is atrophied, the subcutis may still show œdema and inflammatory reaction. Abundant accumulations of hæmosiderin, in crystalline or amorphous form, can be found in areas which clinically had a purpura-like color.

The epidermis, in the early stage, shows œdema, hypertrophy and inflammation. As soon, however, as the papillary layer of the derma is infiltrated with cells, the epidermis is reduced to a thickness of 2 or 3 cells. In some places the entire epidermis is converted into a parakeratotic scale, covered with pigment, and clinically recognizable as the small, thick, black scales. In most cases, however, the epidermis is hyperkeratotic, and produces thin white lamellæ.

Although this man was well in all other respects, he gave a positive Pirquet reaction, and even though the latter is not so valuable in an adult as it is in children, Hodara suggests that acrodermatitis chronica atrophicans may be a chronic tuberclelike, with a tendency to atrophy.

(*Ibid.*, Nov. 22, 1913, lvii, No. 47.)

THE FREQUENCY AND DIAGNOSTIC VALUE OF OPTIC NEURITIS IN CONGENITAL SYPHILIS. S. C. BECK and M. MOHR, p. 1363.

Previous statistics by Japha and Heine gave 82% optic neuritis in 105 syphilitic infants. Beck and Mohr examined 126 cases of syphilis, ranging in age from 8 days to 1½ years; 62 showed distinct optic neuritis, 19 were suspicious, and only

45 had normal eyes. Grouped according to age, those less than 4 months old showed optic neuritis in 58%; between 4 and 7 months, 31%; and between 7 and 18 months, 33%. In the last group, the neuritis cleared up in 3 or 4 weeks, while in the younger patients several months were usually required, even under energetic treatment with mercury or salvarsan. One 8 day old infant had a distinct papillitis. In adults, optic neuritis is seldom caused by syphilis, although Fehr gives an incidence of 2.2%; and emphasizes the absence, in some of these, of any subjective disturbance.

The authors conclude from their studies, that ophthalmoscopic examinations are of diagnostic value, because an optic neuritis may be the first, or the only remaining symptom of congenital syphilis.

(*Ibid.*, Nov. 29, 1913, lvii, No. 48.)

TRICHOPHYTON GYPSEUM ASTEROIDES AND TWO NEW TYPES OF THIS GROUP (TR. G. GRISEUM AND RADIOPLICATUM). W. FISCHER, p. 1395.

Fischer discusses the cultivation and classification of trichophyton, with particular emphasis on the ectothrix type, which is mostly derived from animals. Several cases are described, from whom *Tr. gypseum asteroides* was cultivated. Two new forms of trichophyton (*Tr. gypseum griseum* and *radioplicatum*) are described in detail, and their cultural characteristics illustrated.

(*Ibid.*, Dec. 6, 1913, lvii, No. 49.)

THE THERAPEUTIC USE OF TAR-PASTE (DOHI) IN SKIN DISEASES. T. AOKI, p. 1427.

Tar is very useful as an antipruritic, and to remove the chronic infiltrations of the skin. But it is contraindicated in the acute inflammatory skin diseases. Dohi has therefore advised the following formula: *Pix liquida*, sulphur lotum, and zinc oxid., ãã 10.0, *Adeps*, 30.0. The zinc oxide is antiphlogistic, and protects the skin from the irritating action of tar; while the sulphur and tar, through their reducing action, are keratoplastic, keratolytic and antiparasitic. Aoki finds this paste to be relatively unirritating, even in acute cases, such as *eczema intertriginosum*, although it still retains its reducing action on infiltrations of the skin; and in scabies and parasitic sycosis it is also valuable as a parasiticide.

CONTRALUESIN IN THE TREATMENT OF SYPHILIS. Ed. RICHTER, p. 1429.

Richter goes into the details of colloid chemistry, to show that mercury is much more efficient when dispersed in colloid form. In his preparation, called *contraluesin*, he uses not only colloid mercury, but also quinine, salicylic acid, sozoiodol and arsenic. He has treated 234 cases with his remedy, without a failure.

A REJOINDER TO THE ARTICLE BY DR. JULIUS FÜRTH: "THE TREATMENT OF SYPHILIS WITH CONTRALUESIN." Ed. RICHTER, p. 1438.

In the *Dermatologische Wochenschrift*, Oct. 25, 1913, lvii, No. 43, Julius Fürth reported very unsatisfactory results from the use of *contraluesin*, as abstracted in the *Journal of Cutaneous Diseases*. Richter asserts that the dosage was insufficient. Instead of injecting 1.5 cc. every 5 days, Fürth used 1.0 cc. in weekly injections.

A REJOINDER TO THE PRECEDING REMARKS. JULIUS FÜRTH, p. 1441.

Fürth quotes verbatim from two earlier articles on contraluesin, to show that he followed the technique there advocated. He accuses Richter of constantly changing his technique, and believes that if the method followed by him (Fürth) gave such very poor results, a slightly larger dose or shorter interval would not yield the brilliant results claimed for the remedy.

(*Ibid.*, Dec. 13, 1913, lvii, No. 50.)

DESTROYING THE TOXICITY OF FUR AND HAIR DYES. JAMES COLMAN, p. 1460.

The frequent occurrence, in recent years, of cutaneous disease from the use of hair dyes, or by wearing artificially colored furs, has directed the attention of dermatologists to this subject. Para-phenyldiamin, one of the most used dyes for furs of all kinds, has long been known as a cause of eczematous eruptions. But if the fur is well washed and treated to remove the excess of dye, it becomes harmless. The valuable dyeing properties of para-phenyldiamin have caused it to be used as a hair dye, also, in spite of its local irritant action. This irritant action is due, not to the substance itself, nor to its endoxidation product (Bandrowski's base), to which the coloring properties are due; but Erdmann and Vahlen have shown that the irritation is due to an intermediate oxidation stage, with the production of chinondiimin.

Colman and Loewy have succeeded in preventing the occurrence of this irritant substance, by treating para-phenyldiamin with sodium sulphite. Animal experiments showed a very slight irritant action which was completely obviated by substituting for the para-phenyldiamin the homologous para-toluyldiamin. This is now marketed by the Actien-Gesellschaft für Anilinfabrikation, Berlin, under the name "Primal." Even with this preparation, however, individual idiosyncrasy may occur, but this can be determined by a test application over a small area.

THE DRY TREATMENT OF VENEREAL SORES. EUGEN JACQUES GOLDBERGER, p. 1468.

Goldberger has had very good results from the use of vioform in soft chancres, so that he believes it renders all other remedies superfluous.

(*Ibid.*, Jan. 3, 1914, lviii, No. 1.)

STUDIES ON PROTEIN METABOLISM IN PSORIASIS. JAY FRANK SCHAMBERG, A. J. RINGER, G. W. RAIZES and JOHN A. KOLMER, p. 1.

See *Jour. Cutan. Dis.*, November, 1913, xxxi, No. 11.

(*Ibid.*, Jan. 10, 1914, lviii, No. 2.)

THE TREATMENT OF PEMPHIGUS WITH INJECTIONS OF VESICLE CONTENTS. T. HOLORUT and J. T. LEXARTOWICZ, p. 41.

The serum obtained from vesicles of pemphigus vulgaris was heated $1\frac{1}{2}$ hour to $56-58^{\circ}$ C. and its sterility proven by cultural tests. The serum was then used hypodermically, at intervals of 2 to 10 days. In each of the 2 cases reported, the results were very good, but no definite opinion can be expressed as to relapses.

THE CAUSE OF SYPHILIS WITH REGARD TO THE CHEMISTRY OF THE SYPHILITIC ORGANISM. J. E. R. McDONAGH, p. 45.

The opinion that the *Spirochæta pallida* is not the sole cause of syphilis is gaining support, according to McDonagh. He describes the life cycle of his "Leucocytozoon Syphilidis," as observed in vivo, as well as in films and sections. This organism is a minute and extremely resistant sporozoite, abundantly supplied with nucleic acid. This sporozoite is motile, but not flagellated, and eventually penetrates into a connective tissue cell. It is now called a trophozoite, and converts the host cell's protoplasm into a lecithinglobulin absorption compound, which forms a lipid sheath for the parasite. Within this sheath the parasite undergoes budding, to produce either sexual merozoites, or sexual sporocysts. The latter, however, are found only in the lymph nodes of severely infected cases. An asexual sporocyst can also form, and produce daughter cysts, becoming extra-cellular on account of the degeneration of the host cell. If the merozoite development occurs, it produces 7 to 15 bodies, which are liberated by the bursting of the sheath, and then constitute the male and female gametocytes. The gametocytes are motile, but not flagellated. The male form is tri-nucleate, while the female gametocyte has a nucleus at the one pole and 1 or 2 blepharoplasts at the other. The blepharoplasts disappear as soon as the female gametocyte acquires the size of a red corpuscle. The male gametocyte usually penetrates a leucocyte and then forms a number of spirochætes, radiating like the spokes of a wheel. When the spirochætes become detached, they can be identified as typical *Sp. pallida*. In a chancre or condyloma, where the spirochætes are usually abundant, they may develop from extra-cellular male gametocytes, after passing through a coccus-like stage, as well as a stage that resembles *Sp. refringens*.

Fertilization of the "Leucocytozoon Syphilidis" occurs by the penetration of a spirochæte into a female gametocyte, producing the zygote.

If a section of a syphilitic lesion is treated for several hours with 1% boric acid solution, and then stained with pyronin (Pappenheim's stain), the syphilitic cells are differentiated by the red color from the green nuclei of the other cells. This stain, McDonagh believes, is as valuable in syphilis as the carbol-fuchsin stain in tuberculosis.

In conclusion, the claim is made that all the stages of the life cycle here described have been found in every syphilitic lesion examined to date, and not a single time in the tissues of healthy persons, or those suffering from other affections.

GAZETTE DES HÔPITAUX.

(Jan. 27, 1914, lxxxvii, No. 11.)

Abstracted by PAUL E. BECHET, M.D.

THE RÔLE OF ANAPLYLAXIS IN SYPHILIS. M. BOUVEYRON, p. 165.

Bouveyron cites a number of facts, demonstrating the important rôle of the sensitisation of the organism by syphilis. He believes that outbreaks of the disease correspond to periods of special sensitisation, rather than to an active multiplication of spirochætes. He cites the luetin reaction, as an added evidence of the increased sensitiveness of the skin in the advanced period of the disease. In discussing the effect of mercury on the anapylaxis of syphilis, he states that long continued, moderate doses cause a slow destruction of the spirochætes, and prevent subsequent sensitisation of the organism. Large doses, at comparatively lengthy intervals, produce rapid destruction of the *treponema pallidum*, and a marked subsequent sensitisation of the organism. Salvarsan, when given in large

doses in the active secondary period, is intensely spirillicidal, with subsequent liberation of the endotoxines, which impregnate and sensitize the nervous system. It seems that the nervous system has a special affinity for the circulating endotoxines of the *Treponema pallidum*, and that it is most frequently involved in those cases receiving extensive doses of salvarsan. He concludes by stating that a study of the anapylaxis of syphilis proves that long continued, moderate doses of mercury is still the best treatment, that to avoid the intense destruction of treponemata and subsequent danger of neuro-recurrence, salvarsan should never be given alone, but that mercury should be given both before and after its administration.

(*Ibidem*, Jan. 29, 1914, lxxvii, No. 12.)

THE POLYMORPHISM OF THE SPOROTHRIX. A CASE OF SPOROTRICHOSIS WITH PRIMARY ATYPICAL CULTURES. M. M. DELASSUS and J. SABLÉ, p. 181.

Delassus and Sablé discuss the pleomorphism of the sporothrix, and report a case in a woman, aged 64, who, in unpacking a box containing hay and straw, wounded the palmar surface of a little finger. In 10 days the lesion appeared as an ordinary indolent abscess, with some cellulitis spreading to the dorsal surface of the finger. In a few months, in spite of active local treatment, a large number of new lesions appeared on the arm, apparently following the course of the lymphatics. The sporothrix was successfully cultivated from the pus of the lesions. The sporo-agglutination and reaction to fixative tests were both positive.

LA PRESSE MÉDICALE.

(Jan. 24, 1914, No. 7.)

Abstracted by PAUL E. BECHET, M.D.

THE SERO-DIAGNOSIS OF CANCER. M. RICHARD ERPICUM, p. 68.

Erpicum reviews the history of the sero-diagnosis of cancer, laying particular emphasis on the reaction of Abderhalden, which he has used in a series of 42 cases of various tumor formations, both external and internal. Among the 42 cases, the reaction showed that 33 were malignant and 9 benign. Among the 9 benign cases, 4 had been clinically diagnosed as cancer, while in 7 of the malignant cases the clinical diagnosis was uncertain. In this series of cases the Abderhalden reaction had been of the greatest value, and had proved to be extremely accurate.

RUSSKI JOORNAL KOJNIKH E VENERICHESKIKH
BOLEZNEI.

(Nov. and Dec., 1913, xxvi, Nos. 11 and 12.)

Abstracted by M. L. RAVITCH, M.D.

TRYPANOSOMA-LIKE FORMATIONS IN SKIN DISEASES. ZELENÉV, p. 289.

In a case of ecthymo-gummatous condition of the skin, described by the author in an article under the name "Flagellata in Skin Diseases," he found a trypanoso-

matous-form parasite unlike the one described in dermatologic literature. In his beautiful microphotographs, Zeleny illustrates the different cycles of the parasite. However, he is unable to state the relationship which trypanosoma-like forms have to the described amœbæ in his case. In the case described, the patient had a gummatous swelling of the thumb and an older ulcer on the left leg. This form of trypanosoma-like disease occurred only in central Russia.

A CASE OF LEPRO MACULO-TUBEROSA. BOROVSKOI, p. 293.

Borovskoi states that in the city of Kieff, there are always to be found a few cases of leprosy. In the province of Kieff there are always to be found ten or more cases. The case described by the author, belonged to the type of maculo-tuberosa or mixta, and occurred in a woman, aged 29. The diagnosis was substantiated by finding Hansen's bacilli. The Wassermann reaction was positive. The author claims that lepra, since the discovery of Hansen's bacillus, though it may have a specific origin, yet may not be infectious. The latter theory may be sustained since Stephaniski, of Odessa, in 1903, found in rats a bacillus-mycobacterium lepræ, morphologically similar to Hansen's bacillus. This bacillus is liable to produce in rats a disease similar to leprosy in man. The bacillus and the disease produced by it, was found in rats, in Berlin, by Lydia Rabonvitz, in London by Decu, in Roumania by Mezincescu and Alexandrescu, in Japan by Kitasato, in the United States by Wherry, McCoy and Walker, in Caledonia by Lebœuf, in Australia by Tidswell, in the Hawaiian Islands by Brinkerhoff and in Paris by Marbcoux and Sorel.

White mice were also found to be easily infected by Stephaniski's bacillus, while monkeys, rabbits and guinea pigs were not.

Comparing Hansen's bacillus with Stephaniski's, it was observed that both are liable to produce leprosy after a long incubation period and that the bacillus is found in mesodermic cells. While the first culture of Stephaniski's bacillus is easily developed, and while the subsequent cultures are not successful, the bacillus of Stephaniski is very easily destroyed in any culture media, while Hansen's is more stable. Insects, like fleas, lice, cockroaches and ants do not transmit the disease. Marbcoux and Sorel found that rats usually suffer from swollen glands, while dermic focus of this affection were due to staphylococcus infection.

Drawing an analogy between human leprosy and leprosy in rats, the author thinks that many people may be carriers of leprosy when Hansen's bacilli are found in the glands, though no skin manifestations are apparent. Dirt, poverty, unsanitary condition and ignorance are great factors in propagating this disease. Whether rats are real factors in disseminating this disease, has never been settled.

The author tried his best to find the ætiological factors in his given case, but failed. The patient's relatives, with whom she lived, were absolutely free of the disease.

DERMATITIS HERPETIFORMIS (DUHRING). MUKHIN, p. 300.

Mukhin claims that notwithstanding the extensive study of this disease by many dermatologists all over the world, the ætiology of it is, as yet, unknown. Hallopeau holds that the disease is due to two factors: pregnancy and ingestion of drugs. Similar views were held by Brocq, Duhring, Tenneson, Jamieson, Danlos and Leredde. In the author's case, the disease was caused by internal administration of a balsam preparation for acute gonorrhœa. While the lesions were rather atypical and had symptoms of pemphigus foliaceus in one respect, and in other respects symptoms of erythema polymorphe, yet, in the author's opinion, it was a true case of dermatitis herpetiformis Duhring. The author is in accord with Hallopeau, that in the majority of skin diseases, the eosinophilia is increased. He also noticed that with the disappearance of skin manifestations, eosinophilia

also disappeared. In dermatitis herpetiformis was noticed the diminution of the percentage of polymuclear cells and decrease of eosinophylia.

Reviewing the different opinions of well known investigators as to the aetiology of this disease, the author came to the conclusion that it is rather speculative.

GALYL, A NEW ARSENO-PHOSPHORIC PREPARATION FOR THE TREATMENT OF SYPHILIS. ZELENEV, p. 344

Zelenev has made quite extensive experiments with this new anti-syphilitic preparation of Mouneyrat and claims that it is, in many respects, superior to either salvarsan or neosalvarsan. He cites many cases. Negative Wassermann reactions were observed a longer period in patients subjected to galyl treatment, than in those who were treated with salvarsan.

AMERICAN JOURNAL OF THE MEDICAL SCIENCES.

(March, 1914, cxlvii, No. 3.)

Abstracted by R. C. JAMIESON, M.D.

A CLINICAL NOTE ON FIBROMA MOLLUSCUM GRAVIDARUM. R. L. SUTTON, p. 419.

Sutton refers to similar cases in the literature, and gives the history and pathological examination of his own case. This case had had numerous fibrous growths during her first pregnancy, which later disappeared, only to return during the second one. Some of the growths persisted after the second delivery. He considers the lesions histologically identical with the neuro-fibromas of von Recklinghausen and thinks they are due to some systemic causes of unknown nature.

JOURNAL OF TROPICAL MEDICINE AND HYGIENE.

(Jan. 1, 1914, xvii, No. 1.)

Abstracted by R. C. JAMIESON, M.D.

VERRUGA PERUVIANA, OROYA FEVER AND UTA. R. P. STRONG, E. E. TYZZER, C. T. BRUES, A. M. SELLARD and J. C. GASTIABURU, p. 11.

This article is a report of the commission sent to South America to investigate the above named diseases. From their researches, "it was concluded that verruga peruviana and oroya fever represent two distinct diseases. The former is due to a virus which may be transmitted to animals by direct inoculation, and produces definite lesions in them, whereas the latter is due to an organism parasitic in the red blood corpuscles, sufficiently distinct from the other hematozoa to be placed in a new genus."

In fresh blood preparations the organisms appear rounded or rod shaped and have a definite motility. Cultural attempts have failed as well as inoculations into monkeys and rabbits. The name "Bartonia bacilliformis" is proposed for the organism, which would seem to be intermediate between the protozoa and bacteria.

EDINBURGH MEDICAL JOURNAL

(January, 1914, xii, No. 1.)

Abstracted by CHARLES T. SHARPE, M.D.

ISOLATION AND QUARANTINE PERIODS IN THE MORE COMMON INFECTIOUS DISEASES. CLAUDE B. KER, p. 6.

Dr. Ker, Medical Superintendent of the Edinburgh City Hospital, is of the opinion that the time has come when there should be a revision of the periods of isolation and quarantine periods in the common infectious diseases.

In scarlet fever he doubts very much the infectivity of the desquamation and holds that the period of isolation of the cases might with safety be reduced to five weeks and of contacts to five days.

In diphtheria, no change is suggested. Two negative swabs should control the period of isolation of the patient and of contacts.

In measles, he regards the patients as free from infection as soon as the rash has disappeared; indeed, he has grave doubts if the infectivity does not cease with the catarrh, which, as a rule, has quite disappeared before the rash has begun to fade. He adds that he would regard as possibly infectious, after the rash, cases of conjunctivitis, bronchitis and broncho-pneumonia, although he feels that in these cases also, the infection is probably very short lived.

The quarantine period in hospital outbreaks he holds at fifteen days.

He discusses the advisability of allowing attendance at school of contact cases up to the eighth day after exposure and the closing of the room from the ninth to the fourteenth day.

In rubella, the hospital detention period is ten days. The incubation period is twenty-one days, and Ker suggests that contacts might with safety attend school for two-thirds of this period, certainly for eight or nine days. As to infectivity, he considers most of the mischief to be done in the prodromal stages.

Whooping cough is infective during the catarrhal stages and ceases probably with the establishment of the whoop.

In chicken pox, Ker believes that the patient should be isolated until the crusts disappear.

In mumps, the usual isolation period is three weeks. Ker has never seen harm result from allowing patients out of isolation when a full week has elapsed after the disappearance of the swelling.

The discussion fully bears out Ker's ideas.

(*Ibidem*, December, 1913, xi, No. 6.)

SCARLET FEVER IN THE AGED. CLAUDE B. KER, p. 492.

Ker reports a typical case of scarlet fever in a man aged 74. Of 263,986 cases treated in modern fever hospitals, only 20 occurred in persons above the age of 60 years, while of these only 2 are definitely stated to be 70 years and upwards.

THE RUMPEL-LEEDE PHENOMENON IN THE DIAGNOSIS OF SCARLET FEVER. GEORGE RICHARDSON, p. 496.

Technique. A domett bandage is tied tightly round the arm immediately above the elbow, the correct pressure being such that the pulse is just perceptible at the wrist. The bandage remains in situ for from five to fifteen minutes, and at the end of that time the arm should be markedly cyanosed. Appearance of reaction. The bandages having been removed, the skin at the fold of the elbow, on the side distal to where the bandage has been, should show a widely varying number of minute petechial hemorrhages, fairly deeply seated, which do not disappear on pressure, and are, in fact, made much more evident by stretching the skin. Richardson has found this test of material advantage.

THE JOURNAL OF CUTANEOUS DISEASES

VOL. XXXII

JULY, 1914

NO. 7

LICHEN PLANUS OF THE TONGUE ALONE.

By DOUGLASS W. MONTGOMERY, M.D., San Francisco.

ON seeing a dense white patch on the back of the tongue, evidently due to epithelial thickening, and which has existed for a long time, the first thought is of leucoplasia or smoker's patch, and one naturally correlates it with syphilis and tobacco, and just as naturally one thinks of the evolution of the affection into epithelioma. Nevertheless, white patches resembling closely those of leucoplasia may occur as symptoms of lichen planus. Although the resemblance is close, they are generally distinguishable from leucoplasia, and the following case showed well some of these distinguishing characteristics.

On June 11, 1913, a woman, forty-seven years of age, consulted me on account of two patches on the dorsum of the tongue that at first sight seemed to be leucoplasia.

This was not the first time she had been my patient. Several years before, she had been under my care for falling of the hair, and she said that then I had remarked a white patch on the back of her tongue. The notes of these visits were, however, lost in the Great Fire.

The patches for which she now sought advice were situated bilaterally, each patch occupying about the centre of the dorsum of its own half of the tongue, and recently they had become larger and more pronounced. They were irregularly elongated with their long diameter in the antero-posterior direction. They were dull white in color, they could not be removed by wiping, and they had the appearance of being firmly seated in the tissue. Each patch was dull white in the centre, with a lace work periphery, and under a lens the surface was seen to be papular. There were absolutely no subjective

symptoms in the patches themselves, as of pain, uneasiness, or of undue sensitiveness. The patient would not know of their presence if she did not see them, but far back along the borders of the tongue, **opposite the molars, there was an uneasy feeling** that had been present for quite a long time. The interdental lines were white, and the patient said she had always bitten her cheek pouches; but there were no patches of lichen in these situations. The absence of lichen here was all the more interesting as the cheek pouches, especially opposite the last molars, constitute by far the favorite situation for lichen planus of the mucous membranes. There was a scaly patch near the outer angle of the left eye that had turned brown, but there was no papulation whatever in it. She had a very high color, but no papulation of the cheeks. There was no other abnormality of the skin. There was no affection whatever of the other mucous membranes, as of the anus, rectum or vagina.

For long she had flatulent dyspepsia with acidity, which had recently increased, owing, she thought, to eating berries. She had a nervous disposition, and for years she had a nervous, high pitched clearing of the throat. She was quite a large butter eater, but otherwise her diet was normal.

On the patient's first visit, the lace work border of the patches was my main reason for considering the affection lichen planus. Contributory reasons were the absence of any history or indications of syphilis, and the absence of smoking. At the next visit, one week later, the white coating had so far retroceded as to make the papules **stand out more distinctly**. Three papules could be seen in the right patch, one of which was umbilicated. The left patch had quite a number of papules. By the end of the month the papules themselves had begun to sink down, and the lace work to stand out more prominently. In still another week, on July 8, the patches were characteristic, and there were now three papules in each patch. One of these papules had sunk down so as to leave a perfectly circular, steep edged hole, with the white deposit forming a raised curbing about it. By July 16 the disagreeable feeling at the sides of the tongue had gone. After this there was a slow but irregular improvement. By the first of March, 1914, about nine months after the patient first consulted me, the patch on the right side of the tongue was a faint whiteness on the surface, and that on the left side was much larger in area but, for the most part, of skim milk or opalescent color with, in one situation, a denser thick white. There were no subjective symptoms whatever, and the nervous cough and the gastric symptoms were much improved.

TREATMENT.

The treatment was mainly directed to reducing the diet and the mode of life to the simplest elements, and every deviation from this brought quick retribution, not only on the part of the digestive organs, but also in regard to the tongue. Intricate combinations of food and the multiplication of flavors, as occurs in formal dinners, seemed to be particularly harmful. The sensitiveness of the tongue to berries has been mentioned, and was probably due to the fructose and acid contained in them.

As in food so in medicine: The most favorable results were got in giving the bland, non-irritating drugs, such as carbonate of magnesia and bismuth. For a time small doses of bichloride of mercury were given with seeming benefit. This drug was ordered with the same intent as when prescribed for lichen planus of the cutaneous surface, and probably acted as an antiseptic in the alimentary canal. With the same end in view, small doses of arsenate of potash were also prescribed, care being taken, however, not to give an irritant dose. No particular reliance was placed on it, as it is now well known that arsenic which is so effective on lichen planus of the skin, has almost no effect on lichen planus of the mucous membranes.*

Topically, a ten per cent. solution of chromic acid was painted on the patches at about one week intervals. Once, when the epidermal thickening was well marked, trichloroacetic acid, full strength, was used, but with no apparent benefit. X-rays were not employed. Years ago I used X-rays on a similar case referred to me by the late James Nevins Hyde, and with no benefit, and now it is almost never advised in lichen in this situation. The same is true of the high frequency current, that is at times strikingly beneficial in certain forms of cutaneous lichen.

GENERAL STATEMENTS IN REGARD TO LICHEN PLANUS OF THE TONGUE.

Lichen planus is a general constitutional disease, with eruptions both on the skin and on the mucous membranes, and these eruptions, in both these situations, are strikingly like those of syphilis.

Lichen planus of the mucous membranes:

1. May follow a lichen eruption on the skin; or
2. May coexist with it; or

* Jadassohn, in his annotations of Darier's *Dermatologie* (1913, p. 157), especially mentions this curious circumstance, and the same observation has of late years been made by a number of dermatologists.

3. It may first appear on the mucous membranes and then break out on the skin; or, finally,
4. The eruption may exist on the mucous membranes alone without any lichen eruption on the skin whatever. These last are called "solitary" and it is to this class that the case under discussion belongs.

Trautmann,¹ in a carefully arranged tabulation of one hundred and fifty-seven cases of lichen planus of the mucous membranes, found that ninety-four of them, or 61.14%, were in the second class, in which the eruption coexisted with an eruption on the skin. The next greatest number of cases fell, curiously enough, in the fourth class of "solitary" lichens of the mucous membranes. In this class there were twenty-six cases, or 16.56%. This is surprising, as lichen planus up till recent years has been regarded as exclusively a skin disease, and is so still in the sense that unfortunately dermatologists are the only physicians who take any interest in it.

As before mentioned, Trautmann has collected in all one hundred and fifty-seven cases of lichen of the mouth and upper air-passages.* In eighty instances in this number of cases, or 50.09%, the tongue was affected, as against one hundred and twenty-nine instances, or 82.10% where the cheeks were involved, showing how much more frequently the eruption appears in the cheeks than on the tongue. The lips with thirty-five instances, or 22.22%; the palate with twenty-seven instances, or 17.10%; the gums with seventeen instances, or 10.82%; the larynx with seven instances, or 4.45%; the vulva with six instances, or 3.75%; the tonsils with four instances, or 2.54%; the nasal passages with two instances, or 1.27%; and the pharynx with one instance, or 0.63% follow along in Trautmann's statistics in ever-decreasing frequency.

As before remarked, in by far the greatest number of cases in which there is lichen planus of any of the mucous membranes, the skin is also affected, either coincidentally or subsequently, and as the skin lesions are usually much more characteristic than those of the mucous membranes, it is needless to dwell on how great an aid they are in arriving at a diagnosis. In the previously mentioned one hundred and fifty-seven cases of lichen of the mucous membranes, Trautmann found the skin to be coincidentally affected in ninety-four cases, primarily affected in fourteen cases, and subsequently affected in nineteen cases, so that the skin was affected at some time in the course of one hundred and twenty-seven out of the entire one hundred and fifty-seven cases.

* Loc. cit.

OBJECTIVE SYMPTOMS OF LICHEN PLANUS OF THE TONGUE.

The essential symptom of lichen is a rounded or polygonal papule situated in the upper part of the corium and papillary layer, and composed of densely packed small round cells, so dense and so packed as to give many of the characteristics of a minute tumor. Over these papules the epithelial cells tend to adhere to one another so as to form thickened white masses. If the papules are scattered, the superposed thickened epithelial layers will appear on the mucous membrane as white dots; if the papules are aggregated, the superposed thickened epithelial layers will develop into an evenly thickened white patch, under which the papules will be lost to view like mountains overwhelmed by water. As the thickened epithelial layers recede, the papules again come into view, as they did in the case here reported.

Another characteristic symptom of lichen of the mucous membranes is the meshwork of white lines crossing one another, sometimes with a nodule at the point of crossing, as if to still further accentuate a resemblance to a fishing net or to lace. There is also occasionally a network seen in lichen lesions of the skin, but very much finer meshed than of the mucous membranes. I have, however, seen a coarse meshed lichen eruption of the scrotum, much coarser than any I have ever seen of the mucous membranes. The lacework appearance is infrequent on the back of the tongue.

In the case under discussion there was a heavy white epithelial coat indistinguishable from leucoplasia, with lacework meshes around the periphery, and it was not until later that the white coating thinned sufficiently to allow the papules to be seen with the naked eye.

Lichen planus of the back of the tongue is either a dull white or a bluish, opalescent, skim milk white, as in the present instance. It does not assume the peculiar glitter seen in the eruption in the cheek pouches² and on the under surface of the tongue.

The papules may appear isolatedly, and may be few and confined to one or two situations, as, for instance, the cheek pouches and tongue, or they may appear as innumerable white dots scattered thickly over the back, sides and tip of the tongue, as in a remarkable case reported by Max Joseph.³

In the present case one of the papules was noticed as being umbilicated, that is, sunken in the centre. This is a characteristic involution form in lichen. A papule may sink in the centre and spread at the periphery forming an ever-increasing raised ring with a smooth centre. Such a large lichen ring with a smooth depressed centre has been described by Brock as occurring on the back of the tongue.

Lichen planus of the mucous membranes, whether of the mouth and upper air passages, or of the glans penis, vagina or anus is notoriously indolent, both in its subjective symptoms and in its course. In the present instance there was some sensitiveness to hot or spiced foods when the patient first consulted me about her tongue, and unpleasant sensations on the sides of the tongue far back, that cleared up with the improvement of the digestion. In the before mentioned case reported by Max Joseph, however, subjective symptoms were very pronounced. Before the outbreak of the eruption on the tongue, the patient had a disagreeable sensation as if the tongue were covered with fur, and at the same time marked sensitiveness to hot or peppery foods. Objectively, nothing whatever was to be seen, and as the man had syphilis, Joseph thought of syphilophobia. But he soon came to another view when one day there appeared a lichen planus eruption of the glans penis, accompanied by a few lichen lesions on the tongue, that later developed into the widely scattered eruptions above mentioned.

That lichen planus of the tongue leaves no trace on disappearing is interesting; it does not even leave pigmentation, which is so frequent a sequel in lichen planus of the skin.

In its course lichen planus of the tongue is usually as indolent as in its symptoms. For instance, W. Friedlander dwells on the absence of erosions and of an inflammatory border as distinguishing characteristics from leucoplasia in which both these active manifestations are apt to occur.⁴ In the present instance the disease had existed for years in a mild form, and may exist for years to come. When it does disappear, however, it will leave no trace and no scarring, and it is not a precursor, as syphilis and leucoplasia are, of cancer of the tongue.

Why should one go to so much trouble in explaining the minute appearance and the relationships of an affection so rare, so mild, so indolent, and so little liable to be followed by grave consequences as lichen planus of the tongue? The importance of lichen planus of the tongue lies, undoubtedly, in its diagnosis from syphilis and leucoplasia, and yet intrinsically lichen planus is an important and extremely interesting disease. And although lichen planus of the tongue may be rare, yet the disease, lichen planus, is not rare, and in from one-third to a half of the cases of lichen planus of the skin the mucous membranes are also affected; and besides, as we have seen, the disease may exist on the mucous membranes alone, without the participation of the skin.

As regards treatment, although a complete cure may not be at-

tainable, yet what can be done is often highly satisfactory. The mere diagnosis from syphilis and from leucoplasia with its threat of cancer, is in itself a great relief to the patient. Then a recognition of the real nature of the disease places the physician in an advantageous position in treating whatever subjective symptoms may arise, and every one is aware how gratified a patient usually is on being relieved of a disagreeable or painful sensation in the mouth.

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INDUSTRIAL SKIN DISEASES.

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UNTIL a comparatively recent date but little attention was paid by dermatologists to diseases of the skin due to occupation. There had been reports of a few cases due to some definite external irritant, but no systematic study of any kind. In the past few years, however, hygiene has been making great strides; acts to compensate workmen, disabled in the course of their labors, have been passed, and in these studies it has been found that many of the skin diseases were directly due to external irritation of various kinds. Blaschko and Herxheimer in Germany, and Fordyce and Knowles in America, have done much to advance the study of this group of dermatoses, while Schanberg has done admirable work in emphasizing the relationship of certain cases of skin cancer to the various tar products. Oliver has many excellent pages devoted to the cutaneous manifestations provoked by various trades. These articles give what is practically a complete bibliography.

Fordyce estimates that about two per cent. of the skin cases

seen at his dispensary are due to occupation.⁶ Knowles states that out of 4,000 cases of eczema seen in the Philadelphia clinics, fully one-fourth were of external causation. The figures from my clinics would seem to show that about one-fifth of the cases of eczema and dermatitis are directly due to an external irritant. When it is remembered that eczema, using the term in its broad sense, constitutes over twenty per cent. of all dermatoses, it will be seen that Fordyce's figures are rather low, and that four or five per cent. would probably be a truer estimate.

In dealing with the *modus operandi* of the irritant it must be remembered that the skin is protected by a hard armor plate of keratin, but that in this armor belt there are certain portholes, namely the hair follicles, and possibly the opening of the sweat ducts, and that either mechanical, chemical or bacterial irritants may enter through them. In addition to this the skin is kept waterproof by the greasy secretion from the sebaceous glands. If this secretion be removed by soap and water, or by various chemicals that have the power of dissolving it, the water normally in the skin can readily be extracted by the atmosphere and the skin left rough and harsh. Mild degrees of this condition are known as a chapped skin, but it is easy for the skin to pass into a fissured and inflamed condition, simply as the result of losing its moisture. Almost anyone can set up a dermatitis by washing his hands often enough in hot water and soap. Certain chemical irritants, of which the ivy poison is a good example, can set up an acute dermatitis in a perfectly normal skin.

Diseases due to occupation can be grouped under four headings: first, the diseases that are incited, or aggravated, or prolonged because of the influence of work upon the general health; second, what Blaschko is pleased to call the trade stigmata, not true diseases but rather the earmarks of some special occupation; third, the diseases accidentally acquired because work requires residence in some particular climate; and fourth and most important, the skin diseases that are directly due to the occupation of the worker.

I. In the first group may be placed certain cases of such diseases as acne vulgaris, rosacea, lupus vulgaris, eczema, urticaria, and many other affections, all of which to some extent depend upon the general health of the patient. It is not at all unusual to find that as soon as the patient having any of these afflictions gets a rest or moves into better hygienic surroundings, the disease will spontaneously disappear. Eczema and other troubles will often clear up when a patient's bowels are regulated, and many sedentary occu-

pations more than predispose to constipation. Erythema induratum, a comparatively benign tuberculous affection of the legs, is prone to attack young women who are compelled to stand much of the time, and will usually spontaneously heal upon rest. Eczema, too, may be due to varicose veins, and become better when the leg is kept elevated.

II. The trade stigmata are not true diseases of the skin; rather are they the response of the skin to certain undue work thrust upon it, or due to the accumulation of stains. In this group may be put the callosities of all who do manual labor, the bronzing of those much exposed to the sun, and the staining of the skin from dyes, etc. Metal workers often have a cutaneous discoloration due to the accumulation of the metal in the skin; this is especially true of silver workers, where there may be a slate-like color.

III. The diseases due to residence in some particular country are usually infectious in nature, and need only be mentioned. They are yaws, elephantiasis due to filaria, the pinta of Mexico, various other forms of ringworm infection, oriental sore of the tropics, verruca Peruana, and various other similar conditions, some of which have probably never been described. Erving mentions a peculiar macular dermatitis that affects those climbing the Andes, the cause of which is not known.

IV. The most important group consists of those diseases set up by the occupation of the patient, and usually due to some form of external irritation. The irritation may directly set up a dermatitis, it may cause a portal of entry for infecting organisms, or it may furnish the organisms.

A. Mechanical causes are responsible for abrasions and bruises, as well as for callosities. Ulcers of considerable severity may follow repeated trauma, and neoplasms at times seem to be due to the same cause. Oliver states that the "beat hand" of the miner is due to the repeated irritation of the pick handle forming a callus, beneath which infection may occur. A similar condition is sometimes seen in those who have to do much rowing.

B. Abnormal temperatures may cause many diseases of the skin. Those who work over furnaces or with molten metals may be burned either by radiated heat or by flying particles. Crocker states that pianoforte makers are very apt to have a dermatitis because of the heat in which they are obliged to work. Those who labor in intense heat are also apt to have prickly heat or miliaria.

Chilblains or frost bites may result from working upon cold floors, or from exposure out of doors during severe weather.

Under the name of "dermatitis hiemalis" Corlett has described an eczema undoubtedly due to cold.

Paschkis refers to the fact that flakes of frozen carbon dioxide, falling upon the hands of a chemical worker, causes a pointed condition of the fingers and thumb.

C. Abnormal conditions in the relative humidity of the air may also cause certain cutaneous troubles. The most generally recognized of these is a cystic degeneration of the sweat ducts, known as hydrocystoma, and occurring in those who have their faces much exposed to steam; it is especially common in washwomen, who work over a steaming tub.

Oliver states that those who climb mountains where the air is very dry suffer from an "inflammatory redness of the skin," probably eczema. Lawrence and Sutton both agree that keratoses may be due to a very dry air, aided by an excess of sunlight.

D. Changes in air pressure may cause purpura, as seen in the victims of caisson disease.

E. Excessive light, or light containing too many actinic rays, may cause serious damage to the hair or skin.

Probably the best known example of this is the X-ray burn. Pusey, in his excellent description of this condition, states that the rays first produce a stimulation of pigment, and next a superficial erythema, most marked around the hair follicles. The next stage of severity is a marked dermatitis, apt to go on to vesiculation. In still more severe cases there is a deep necrosis of the skin and underlying tissues. Persons who have never shown acute burns may develop telangiectases with atrophy; the skin is dry, due to destruction of the glands, the hair is missing, and there are apt to develop keratoses which may go on to cancer formation. These X-ray cancers are often of the prickle-celled type, invade the local tissues deeply and often metastasize to the neighboring glands. Or ulcers may form that later undergo malignant degeneration. The acute condition is rather rare in X-ray workers, but the second or chronic form was comparatively common until the dangers were realized, and the operator took protective measures.

Radium can also cause either an acute or chronic dermatitis, comparable to the form just described.

According to Oliver, men who are engaged in electric welding suffer from a condition of the skin that is comparable to sunburn. Oliver states: "The reddening of the skin does not appear to be due to the high temperatures, for the heat generated does not radiate very far, but is more probably the result of the combined electrical

and chemical action of the light rays as occurs in Röntgen rays." In some of the works the men are said to wear a helmet containing colored glass, and the body also must be thoroughly protected.

Unna has described a condition occurring in men who are much exposed to the weather, and more especially the great light frequently encountered upon the ocean, and which he has named "Sailor's skin." Only those parts exposed to the weather are affected. The disease starts with a diffuse cyanotic redness on the ears, cheeks, temples, hands and wrists. There is a scattered pigmentation with a diffuse hardening and thickening of the skin, and later keratoses may develop, which may degenerate into basal-celled carcinomata or rodent ulcers. Unna considers that this condition is due to an acquired hypersusceptibility to light, and is comparable to xeroderma pigmentosum, except that the latter condition is a congenital hypersusceptibility.

After a careful weighing of the evidence, Harding decides that alopecia, especially in blondes, may be due to excessive exposure to the sun.

F. Persons following certain occupations are, of course, liable to infection with certain animal parasites. The most common of these afflictions are due to various types of pediculi, bed bugs, fleas, the itch mite of scabies, the brown-tailed moth, the sand fly or chigger, the mosquito, the black fly or simulium and the midge or ceratopogon.

Pediculosis and scabies are especially liable to occur wherever people are much crowded together, or where men have to mingle with these gatherings, or the individuals composing them. For this reason not only the cheap class of help, especially those doing contract labor and living in shacks, but also contractors, builders, physicians, nurses, hospital attendants, school children and teachers of both the upper and lower grades, policemen, street car conductors, etc., are liable to be the sufferers.

In winter all of the lumber camps are infected with pediculosis corporis to such an extent that many of the better class of lumbermen refuse to work in them.

Lumbermen, rivermen, guides and all those whose work takes them into the north woods during the early Summer months suffer intensely not only from mosquitoes, black flies and midges, but also from the biting flies of the order Tabanidae, and commonly known as moose and deer flies.

In 1909, Schamberg and Goldberger described a parasite, the *Pediculoides ventricosus*, occurring in wheat. It may persist in the

straw for many months, and by some is believed to live in flour. It is especially prevalent in Ohio, Indiana and Pennsylvania, and affects not only the farm hands and harvesters, but also the packers who use the straw in shipping, all who may later come in contact with the straw, and possibly those who handle the flour. The eruption caused by this parasite resembles either a severe urticaria or erythema multiforme.

Dermatitis due to the brown-tailed moth (*Euproctis cryssorrhœa*) is now well recognized throughout New England and is most frequently seen during May and June. The active factor in producing the trouble is the barbed hairs, not only of the caterpillar, but also of the cocoon and moth, these hairs actually containing an irritant poison. The lesions are urticaria-like, and may persist for some little time. Those employed in the eradication of this pest, farmers, etc., are especially liable to suffer.

Toe-itch, or ground-itch, so well known throughout the southern part of the United States, in the tropics, and throughout Europe in those who work underground, is due to an infection with the larvæ of the hookworm parasite. This trouble is certainly most prevalent among miners, and in the "poor white" districts of our own country. As to how far the mills of the South are responsible for this malady is still an open question.

G. Vegetable parasites, other than bacteria, are of considerable importance. Foremost among them is *tinea tonsurans*, or ringworm of the scalp, so prevalent among school children, or the inmates of various homes. In Paris the situation was so severe as to require the establishment of "ringworm schools." Much work has been done with the view of eradicating this condition, and in several cities X-ray institutes are especially fitted up for the treatment of school children.

Tinea profunda is a deep form of ringworm, usually occurring upon the back of the hand or wrist of those who work around horses.

Favus is not indigenous to America, and is primarily found in our immigrants from Russia and Italy, and secondarily in those who have to associate with them. Practically it is most often met with in school children who attend schools in which there are infected foreigners.

Tinea circinata is sometimes contracted from dogs and cats, and is fairly common among fanciers of these animals.

H. The most important disease due to a spirochæte is syphilis, and at times syphilis is an industrial disease, for physicians, dentists,

midwives and wet nurses may be infected while in the line of their duties. Chancre upon the fingers of those doing obstetrical or gynecological work are by no means rarities. Glass blowers occasionally become infected from the mouthpiece of their instruments, when a syphilitic individual has used the same tool.

I. Diseases due to bacteria are of great importance, and much time and money have been spent in the effort to eliminate some of them.

Seborrhœa is not a disease of the aborigines. Lain states that the American Indian never had dandruff until sent to school, and it is a frequent observation among mothers that their children first catch dandruff while attending school.

Impetigo contagiosa is frequently contracted in school. It is well to remark at this point that varieties of impetiginous eczemas are also distinctly contagious, and are certainly contracted in school. Too many physicians refuse to believe that some of these eczemas are contagious, and that the children should be isolated until they have recovered.

Furuncles, due directly to staphylococci, are often incited by work that stops the pores of the skin, thus preventing drainage. All who work in grease, in sugar, in aniline dyes, or where there is much mineral or metallic dust, are very liable to small boils. Workers in paraffin and tar are especially liable to have boils, as are those engaged in the manufacture of chlorine. Men who sweat a great deal are also particularly susceptible, presumably because sweat and heat form an excellent culture medium for bacteria.

Glanders, in any of its four forms, that is the acute and chronic types of lymphatic or nasal infection, occurs only in those who are much with horses—hence farmers, stable men, grooms, jockeys, etc., are usually affected.

Anthrax as an industrial disease is well described by Oliver. The cutaneous manifestation of anthrax is known as malignant pustules, and chiefly affects the face and neck of those engaged in certain industries. Legge has collected many cases, and states that they occurred in worsted and wool factories, in horsehair and bristle works, in workers among hides and skins, in tan yards, and in dock laborers. Farmers, butchers, and meat inspectors are also liable to infection.

Small tubercles of the skin are apt to occur in medical men, especially those doing autopsies upon tuberculous subjects. Infections due to the bovine bacillus are also found in butchers, cooks, and those who handle raw meats of diseased cattle.

Leprosy is occasionally contracted by those in attendance upon patients suffering from this disease, but as a rule very prolonged and intimate contact is necessary.

J. There are a number of infectious diseases of totally unknown aetiology that occur only in those following certain industries.

Acute septic pemphigus is found chiefly among butchers; the disease has all the earmarks of a virulent septicæmia, and is associated with large bullæ scattered over the body.

Foot-and-mouth disease is well considered by Boggs. It is primarily a disease of cattle, and may occur in attendants upon diseased cattle. In man, vesicles are found about the mouth, but may spread over much of the body. Bowen thinks that it may be related to the pemphigus just described.

Erysipeloid has been studied by Gilchrist. It usually arises from lesions induced by the handling of crabs or fish, but also from meats at times. It appears as a sort of mild erysipelas, affecting the finger and is not associated with any general disturbance.

Molluscum contagiosum is usually found among school children, or among the inmates of a home. By some it is believed to be transmissible from pigeons.

K. The most important group of cases, however, is that due to chemical irritation, the lesions arising directly as the result of the irritation, or through infection taking place through portals of entry made by the irritants. In the order named, the lesions run in frequency: irritant dermatitis, ulcers, cancers.

Ulcers are especially apt to occur among chrome workers. They also form in those who work in arsenic, hydrofluoric acid, or other strong acids or alkalies. Oliver states that flax spinners are especially liable.

Skin cancers, usually of a comparatively benign type, occur in workers in paraffin and tar. Chimney sweeps and gardeners who handle soot are also liable. In the tar works many of the men suffer from a folliculitis, as a result of which keratoses develop, and these keratoses in turn undergo malignant degeneration, fortunately, however, usually of the rodent ulcer type. Chimney sweeps' cancer is well known. It is apparently due to the accumulation of soot on the scrotum, upon which part most of the cancers originate, although they have been described upon the neck and various other places. They may be either basal-celled or squamous-celled in character.

The question of the relationship of eczema to irritant dermatitis is a mooted one. Most of the older dermatologists held that al-

though the two conditions ran the same course, presented the same clinical symptoms, had the same pathology and were helped by the same remedies, yet they were of necessity different, although they were unable to define in what the difference lay. On the other hand, the younger school of dermatologists holds that very many cases of eczema are directly due to external irritants. It should be remembered that some skins are more susceptible than others, and that there are many predisposing causes to eczema, among them being poor circulation, disturbed digestive functions and other conditions of lowered vitality.

There are certain eruptions that are associated with definite occupations. Herxheimer gives a list of 74 trades causing dermatitis. The men following many occupations are liable to develop cutaneous trouble, although there seems to be ample evidence to show that susceptibility plays an important rôle.

Aniline dye workers are especially apt to suffer from an eczematous condition of the hands. Both the makers and users are liable to this trouble, so it is very widespread, and has attracted much attention, especially in Germany.

Arsenic is very apt to cause either eczema, ulcers or furuncles; not only the chemical workers suffer, but also those who use it in the arts, especially furriers and taxidermists, since arsenic is much used in preserving skin.

Bakers often suffer from an acute eczema of the hands and face, often secondarily involving the entire body. This may be due to a mite in the flour, possibly the *Pediculoides ventricosus*, but is more probably caused by the moist dough and the saccharin solutions.

Barbers have eczema of the hands and fingers because of having their hands so much in water, and also because of their use of hair tonics and dyes.

Bartenders are prone to eczema, not because of water alone, but also from the spilling of alcoholic beverages over their hands.

Bleachers and cleaners are great sufferers, the trouble being generally attributed to benzine, chloride of lime or acids.

Borax workers, both those who gather it and those who use it, especially scrub women, suffer greatly from chronic eczema. Cushny calls especial attention to the irritating properties of borax upon the skin.

Bricklayers suffer much because of the wet mortar.

Bronzeworkers suffer not only from boils, but from eczema as well, probably due to the metallic dust plugging the sebaceous ducts.

Canners are very apt to suffer from eczema of the hands, either because of the moisture, or from the chemicals used to preserve food, or because of the substances used in sealing the cans.

Cement workers have eczema as a result of their hands coming in contact with the cement. Portland cement is said to be especially irritating.

Chemical workers are especially liable to suffer. The manufacture of certain chemicals is prone to set up an irritation. Among these may be mentioned arsenic, calcium chloride, caustic soda, hydrofluoric acid, opium, potassium bichromate, sulphuric acid and tar. Druggists and chemists often have eczema, especially of the finger tips, and physicians, surgeons, medical students, nurses, hospital attendants and laboratory workers have a dermatitis from the use of various disinfectants, chiefly formalin and bichloride of mercury.

Cloth handlers are frequent sufferers, although the reason is not known, unless it be due to the dyes or the irritating properties of the wool fibres.

Coopers have eczema due to the caustic soda used in cleaning the barrels, and the paint used in refinishing them.

Dyers are very apt to suffer, especially those using the anilin dyes; the workers in the dye houses of the mills have eczema more frequently than any of the other employees.

Electroplaters, according to Hall, are affected because of the sour beer used in the trade. The scratch brushers, mostly women, are the chief sufferers. Knowles states that a soap bark preparation has now displaced the beer in many shops, and eczema is much less prevalent. The polishers of silver also become affected, probably because of the rouge used in polishing. This rouge consists of mercury, iron and wax, the last to make the mould. Some of the French-polishers use potassium cyanide or bichromate, and hence are very liable to cutaneous troubles.

Enamelers, states Herxheimer, have outbreaks due to various solutions that they use.

Flax workers suffer, not only from an acute form of eczema, but from ulcers as well, because the threads that they handle are passed through hot water containing lactic acid and butyric acid in order to remove various impurities. The dripping gets on the bare feet of the employees, so similar conditions are found there.

Flour workers, millers, bakers, grocers and cooks suffer from a squamous form of eczema, which may or may not be due to a mite in the flour.

Fruit handlers frequently suffer because of the irritating properties of the fruit juices.

Furniture polishers may suffer from a very acute form of dermatitis, probably caused by the methyl alcohol in the polish.

Furriers are frequent victims, doubtless because of the arsenic in the furs; Oliver states that this is usually present in a quantity greatly in excess of that allowed by law. In some cases it may be due to dyes. The wearers of furs frequently have a dermatitis.

Glass workers are sufferers because of their hands coming in contact with hydrofluoric acid or copper sulphate.

Gold refiners, who extract the metal by the potassium cyanide method, are frequently afflicted.

Grocers have eczema, presumably because of the sugar and flour that they are called upon to handle.

Hair dye makers and users frequently have an acute form of dermatitis. In recent years a large series of such cases has been published in the various American medical journals.

Hat makers, especially those who have to do with the moulding and dyeing, frequently have eczema. Knowles states that this may be because of the handling of acids, of dirty water, or of the hair of animals.

Houseworkers, including wash women, maids and all whose hands come much in contact with soap and water, form the largest class of dispensary patients. Those using much borax, or strong alkaline solutions, are the most apt to suffer.

Ice men are liable to dermatitis, because of the cold and moisture to which their hands are continually subjected.

Ice cream makers suffer for the same reason.

Laborers have dermatitis because of the various irritating substances that they are called upon to handle, and because of the amount of soap and water that they are compelled to use.

Lacquer workers are very apt to have a dermatitis venenata because of a poisonous oil in the lacquer. The Chinese lacquer workers are said to wear gloves while engaged in their trade.

Laundry workers are frequently seen in the dispensary because of a papular eczema of the hands and forearms, caused by alkalis and water.

Leather workers occasionally suffer because of aurantia, a cheap dye used to stain leather, and also because of the arsenic used in the dressing of leather.

Linoleum makers have eczema excited by crude naphtha, according to Herxheimer.

Masons have a dermatitis excited by Portland cement and by mortar.

Match makers were formerly the victims of phosphorous poisoning, but since the sesquisulphide of sulphur has been substituted the conditions are much better, although Oliver states that this chemical not infrequently excites an eczematous condition of the hands.

Mechanics suffer because of the use of petroleum products.

Moving picture operators have eczema and fissures upon the fingers that come in contact with the cement used to piece films. This may be avoided by the use of flexible collodion.

Mother-of-pearl workers are afflicted because of the fine dust caused by their work.

Painters may have cutaneous irritations due to either turpentine, shellac or ethyl alcohol. Shellac frequently contains arsenic.

Paperhangers are great sufferers because of the paste. They are also affected by the dyes used in the papers, especially arsenic.

Paste handlers, especially bookbinders, are frequently troubled by eczema. When the pastes are made from glue they are especially irritating.

Photographers suffer from coming in contact with metol, and autotype photographers because of the potassium bichromate and platinum.

Plant handlers are often affected. Gardeners, florists, farm hands, housewives and all classes of people whose work or pleasure brings them in contact with plants are included under this heading. White has written a valuable book on the various poisonous plants; among them are included chrysanthemums, primroses, arbor vitæ, squill root and poison ivy, oak and rhus. The last affect because of an oil, toxicodendrol. The lily pickers of Sicily suffer from gathering daffodils.

Plasterers suffer because of the lime in the plaster.

Porcelain workers have a form of acute dermatitis due to turpentine, according to Herxheimer.

Printers suffer from dermatitis as a result of coming in contact with benzine, impure turpentine, oil, lye, acids and soap.

Soap makers suffer from the alkalis.

Sugar workers frequently suffer from dermatitis, and boils and lymphangitis are not uncommon. Fordyce states that this may be due to a mite in the raw material.

Tanners suffer because of lime, potassium bichromate and muriatic acid and arsenic used in the curing, tanning and dyeing of hides.

Tobacco workers have eczema, often of a chronic form, excited by the caustics used in separating the leaves.

Woodworkers have dermatitis, excited by the resinous dusts in coars wood, East India satin wood, teak wood, ebony and rosewood. This is due to an oil, probably analogous to toxicodendrol.

The prevention of trade dermatoses rests upon identifying and avoiding the poisonous substances. In many instances a poison will affect only one of a group of men handling it: the element of personal susceptibility can never be dismissed. In some instances the wearing of gloves will cure an attack, in other instances it may be

necessary to discontinue work for a time, and in other cases a change of work will suffice. In many of the large industrial plants provision is made to move a man from one job to another when a dermatitis develops. In some cases the hands should frequently be washed in order to remove any irritating substances, in other cases water will act as an irritant to the inflamed skin. The hands should always be thoroughly dried, and softened by the use of some simple ointment. All abrasions should be sealed with collodion.

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CHEILITIS EXFOLIATIVA.

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CHEILITIS EXFOLIATIVA is one of the very rare skin diseases, and for that reason alone has attracted very little attention. If it were more common, scientific investigators would undoubtedly become active and endeavor to find the cause, or, what is of more importance to the patients, a cure; some of the few cases that have been

reported have been carefully studied, but nothing definite has been proven as to the causative factor.

It is obviously impossible to secure a section of the skin for microscopic study, as patients naturally resent the disfigurement that must necessarily result from excising even a small piece. Different micro-organisms have been found, but they are only those that occur normally on healthy lips: streptococci, staphylococci, bacilli, saccharomyces, but nothing that could suggest a cause. If it be bacterial in origin—and there is every reason to believe that it is—it is a germ that so far has escaped observation. Repeated examinations were made in the following cases, but with negative results.

Unquestionably, this condition is met with not infrequently by many observers, but that it has not been studied or but rarely reported is shown by Case No. 3, who had been treated by several dermatologists in this and other cities, but as far as is known no report of this patient has been made. The disease seems in itself rather insignificant, but to the patient it is of the greatest moment; he is constantly reminded of it every time he moves his lips in speaking or eating, and becomes self-conscious, thinking that everybody is watching and criticizing him. In many cases, after several years' constant treatment and little or no relief, he becomes melancholic and completely discouraged; his attitude toward life is changed; he shuns society, for he feels that society is avoiding him, and becomes convinced that there is absolutely no hope of a permanent cure. In this he is more or less right, as few cases have ever reached permanent recovery. He is constantly annoyed with the rapid formation of crusts on the vermilion of the lips, which in the course of a day or two separate; and as a rule the attachments to the skin surface and to the mucous membrane of the mouth are firmer than on the vermilion, so that he will continue to pick at the edges in order to remove this foreign body. When this is kept up for years, it is surprising that serious results do not more frequently occur. If the injury produced by the baby nursing at the mother's breast can cause cancer, or even a slight trauma, how much more readily can serious lesions be brought about by the constant picking at the lips? It is quite a common occurrence for a cancer to grow on the lips from the use of a pipe held in one corner of the mouth. There the irritation is from pressure, plus heat and possibly nicotine. With cigarette smokers, the first factor is lacking, but to the last two is added the additional one of the paper sticking to the lips and being picked off. Perhaps in the near future we will be able to ascertain the true cause of cancer, whether it be of microbial origin, traumatic, or due to the development of prenatal cells; but there has been an adequate number of cases reported to prove that cancer has developed on the lips of men who smoke a short clay pipe and who invariably hold it in one position in the mouth. That is sufficient to prove that even if there is some latent factor, trauma plays a great part in its production. And it seems rather remarkable that even in the few cases of cheilitis exfoliativa reported, cancer is not

more frequent, for surely trauma is a tremendous factor; but perhaps the true but unknown factors were lacking in these patients. This is what occurred on the lips of Case No. 1, and illustrates this point. He was constantly picking at the scales, a circumstance which was equally bad if not worse than the clay pipe in the mouth of the smoker. There was a total abstinence from the use of tobacco in all three of my cases. One was a woman and the other two absolutely denied the use of it.

If constant irritation be a factor in the production of cancer, the *percentage* of cases resulting from cheilitis exfoliativa should be much higher than in the clay-pipe smoker, as the latter refrains from smoking at certain times of the day and night, while a patient with cheilitis exfoliativa has the irritation constantly with him and will wake up in the night and pull at the scales.

In 1890, Stelwagon¹ reported two cases of persistent exfoliation of the lips which he had studied very carefully, both of whom were in women and which he was inclined at that time to look upon as cases of persistent seborrhœic eczema, as there was slight seborrhœa capitis in both cases. In the last edition of his work on Dermatology, he still includes them under the general heading of seborrhœic eczema, but under the title of cheilitis exfoliativa.

Galloway² reports one case and Jamieson³ another, but the name cheilitis exfoliativa was not given until a much later date, when the condition was looked upon as a distinct entity.

Besnier always found it associated with seborrhœa of the scalp and face, as did Galloway in his case; but it was absent in Jamieson's³ and Crocker's cases. In my three, one had seborrhœa capitis to a marked degree; another, no sign nor symptom of it now, but about fifteen years before the disease occurred on the lips, he had a marked case of what from his description must have been a generalized seborrhœic eczema, and which lasted about six months. He had never had any return of the eruption. The third case is entirely free from any sign of seborrhœa or any other skin disease and always has been.

There was at no time the slightest itching of the lips in any of these three cases, but in one case a distinct burning sensation was complained of and a sense, as she expressed it, of flushing up as would the face in blushing, and of feeling intensely hot.

Crocker says the lips are always swollen, but this need not be the case, for one case of mine did not show this feature at all and never had, though in the other two, swelling was a marked feature.

Trimble⁴ reports a case which he presented at the New York Academy of Medicine, Section on Dermatology. A woman, 23 years old, had had the disease for two years; both upper and lower lips were involved, the crusts were yellowish and the lips slightly fissured. She was of very nervous temperament. Dr. Lapowski had seen this case previously and looked upon it as a first attack of dermatitis herpetiformis, and while pemphigus was suggested, the age of the patient, the sharply defined bor-

der of the erythematous patches, the small size of the vesicles and the fact that the vesicles arose from an erythematous base and not from normal skin, were all against that diagnosis. The above case, reported as cheilitis exfoliativa, differs radically from my cases, for in them there were no vesicles and very little erythema when the crusts were removed and only a very slight amount of moisture.

CASE REPORTS.

CASE 1. Mr. E. R. C., merchant, aged 56. The patient comes of a very markedly tuberculous family; the father and mother and two sisters having died of tuberculosis. Two other members of the immediate family are now suffering from the disease, but as far as he knows, the patient is free from phthisis, though below normal weight and of a nervous temperament. Fifteen years ago, he had a more or less generalized skin eruption which, from his description regarding the situation, appearance and itching, was of a seborrheic character. This eruption was not constant but was worse at some times and entirely absent at others. The bowels were slightly constipated and he suffered from indigestion for years, but has prevented recent attacks by care in his diet. He has been entirely free from any generalized eruption on the body for the past fifteen years.

The condition on the lips has existed for ten years and has changed very little in character until about five months ago. The scaling in this patient is of a fine character, is very flaky, and brownish in color. The scales vary in size from $\frac{1}{8}$ to $\frac{1}{4}$ of an inch and are very thin and brittle, crumbling from little pressure. The eruption is confined to the lower lip, which is not swollen and the patient says never has been. The mucous membrane of the mouth is not and never has been involved. When the crusts are removed, usually a small amount of blood exudes and the same would occur if the lip were moderately squeezed. After an application of a mild caustic, the irritation from a cotton application caused slight bleeding. The slightest degree of trauma will produce a hemorrhage, which very quickly ceases but is ready to break out anew at any time. About five months ago, the patient noticed on the lower lip on the right side and extending back over the vermilion border to the mucous membrane of the mouth, a spot which he thought at first was similar in character to those on other parts of the lip, but which soon took on the appearance of an ulcer. He had very frequently had attacks of stomatitis and it was only on account of the unusual duration of this spot that he sought relief. The lesion was $\frac{3}{8}$ of an inch long by $\frac{1}{4}$ of an inch wide, irregular in outline, with a rolled, waxy border and a depressed centre, covered with a white crust; this would bleed on the slightest provocation and reform very quickly. At no time has the patient used tobacco in any form, but he was constantly biting and picking at his lips. He absolutely denied syphilis and while in some respects this lesion did resemble a mucous patch, it was too deep and the edges too typical of epithelioma to require more than a passing thought of a luetic lesion. There was no pain nor discomfort at any time, except that which naturally arises from a slight thickening at one corner of the lip. Upon operation, it was found that the epithelioma had invaded not only the adjacent glands to a slight extent, but the mandible was involved and a large portion of it had to be removed.

CASE 2. Mrs. F. S., aged 32, was a small, rather poorly nourished woman of an excessively nervous type, who had never had any severe illnesses except those incident to childhood; she has pain in the left side of the lower abdomen which began shortly after the birth of her only child, six years ago. This has been diagnosed as a disease of the Fallopian tube and ovary, and she has been

urged to have an operation performed, but on account of her extreme nervousness has always avoided it.

The present trouble dates back three years and is confined absolutely to the lips, which are quite markedly swollen. There is no seborrhœa of the scalp or any other part of the body and as far as she remembers, there never has been. There is at all times a burning sensation in the lips and unless they are kept moist with ointment they feel drawn and cracked. The lower lip will exfoliate in 24 hours in one very thin, clear, almost transparent plaque, whitish-gray in color and unless pulled from its attached border, the lip will show no sign of oozing or bleeding. Frequently, if she wished to make a good appearance for a few hours, she would lift the scale in one plaque by squeezing the lip half a dozen times and this would loosen it, so that it could be cut away from its attachment. If ointments are applied constantly, the scaling is less profuse and not in such large flakes. The lips are usually soft and pliable after the scale has been removed and never very stiff at any time, but appear, before the removal of the scale, as though a piece of thin isinglass were over them or as though they had been painted with collodion. The normal vertical lines of the lips are very much accentuated and are especially prominent just as soon as the scale is removed. There is no excessive moisture and no vesicular or papular formation.

CASE 3. S. W. F., aged 20. The patient is a very thin, neurotic youth with the history of measles and whooping cough in childhood. He is morose and moody and worries excessively about the eruption which has existed on both lips for seven years, during which time he has been treated by several well known dermatologists, some of whom were able to temporarily check the disease but which invariably returned to the original condition; he was given X-ray treatment for one year.

The lips are very much swollen, probably twice the size they normally should be and show abundant scaling. The exfoliation is not in one complete strip as in the second case nor scattered as in the first, but comes off in thick shreds, which are firmly attached to the healthy skin. These shreds could not be lifted very readily until they freed themselves of their own accord, which took a couple of days. They were whitish in color. The lips were not indurated but, on the contrary, felt very much the same as normal lips feel. When the scales were forcibly removed, there were no signs of inflammation except at the border, where the scales had been pulled off. There was little or no moisture—no more than is normal in healthy skin. The folds, however, were rather deeper than usual. Under the application of an ointment containing betanaphthol and sulphur and the use of the high frequency current, the character of this scaling changed entirely. The scales became very small, not more than a sixteenth of an inch in diameter, formed very much more slowly and came off more readily than before. There was no sensation whatever, except when he pulled off the crusts there would be the slight feeling of discomfort that one experiences in removing the skin from chapped lips. There was an extensive seborrhœa of the scalp but the body had always been entirely free of that disease.

After a careful study of these three cases, it seems difficult to catalogue them. Two might be included under the head of seborrhœic eczema, as there was evidence of it elsewhere on the body, but the third had no cutaneous eruption of any kind. Even if there be no other evidence of seborrhœic eczema in the one case, there is no good reason for not considering it as an unusual type of that hybrid disease, and until further information is obtained bacterially it probably will be considered as an anomalous form of that well-known condition.

PLATE XXXII.—To Illustrate Article on Cheilitis Exfoliativa, by
DR. HENRY KENNEDY GASKILL.



Fig. 1. Case 2.
Cheilitis Exfoliativa.



Fig. 2. Case 3.
Cheilitis Exfoliativa.

Treatment has proved unsuccessful in all these cases; perhaps the greatest amount of improvement was noted in Case 3, but it is far from satisfactory both to the patient and the physician.

I wish to take this opportunity of thanking Prof. Henry W. Stelwagon for the privilege of reporting Case 2, who was under our care at the Jefferson Hospital.

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1610 Spruce Street.

SOCIETY TRANSACTIONS.

NEW YORK DERMATOLOGICAL SOCIETY.

Regular Meeting, Feb. 24, 1914.

J. A. FORDYCE, M.D., *President*.

SARCOMA TREATED WITH THE X-RAY. Presented by DR. MACKEE.

This patient was presented at the last meeting of the Society by Dr. Fordyce. There was, at that time, a vegetating and ulcerating lesion involving both the upper and lower lids of the left eye and the greater part of the left side of the face. The histological examination showed the growth to be of a sarcomatous nature, probably a perithelioma. One massive X-ray treatment was given six weeks ago. The malignant growth had entirely disappeared. There were some scattered areas of pyoderma and the eyelids were œdematous and everted. This would probably require a plastic operation.

RINGWORM OF THE NAILS. Presented by DR. JACKSON.

The patient was a young man, born in Japan, who had been in this country about six months. He stated that his father and one sister had the same disease, and had had it for many years. A brother of his father also had the disease. The patient stated that the first appearance of the disease was on one foot, about seven years ago. It appeared on his right hand about four years ago, and on his left hand about a year ago. A small, red, scaly patch on the palm was the first indication of trouble. This spread along the palm, involved the finger, and then the nail became diseased. Both palms were slightly red and scaly. The scaling was superficial. Nearly all the nails were broken, showed white lines, and were disintegrated, especially on the distal ends and at the sides. The nails of the feet presented similar appearances. An examination of scrapings from the nails, made by Drs. McMurtry and Sharpe at the Laboratory of the Skin Department of the Vanderbilt Clinic, showed ringworm spores in them.

DISCUSSION.

DR. HOWARD FOX said that if the nails alone had been affected he would have made a possible diagnosis of ringworm, especially as the nails were symmetrically involved. He would not, however, have associated the diffuse scaling of the hands with ringworm.

DR. MACKEE said the fact that two of the nails showed faulty development, having deep-seated, transverse ridges, instead of being scaly, as were the other nails, together with the fact that the palms and backs of the hands were scaly, would suggest eczema. The microscopical findings, of course, were conclusive. The speaker said he had had considerable difficulty in differentiating between eczema, psoriasis and ringworm of the nails, where there were no concomitant symptoms.

DR. JACKSON said that at first he had thought the disease was atrophy of the nails, but that the examination made at the Laboratory of the Vanderbilt Clinic showed that it was a case of ringworm. The spores were found in great abundance in scrapings from the nails. The patient informed him that ringworm was very common in Japan, and that he had had well-marked patches of it.

TINEA TONSURANS TREATED WITH THE X-RAY. Presented by DR. MACKEE.

The patient was a girl, 7 years of age, from Dr. Fordyce's clinic, who had had a multiple, large-spore infection with kerion lesions. The scalp had been divided into five areas as per the Adamson method and each area was given 4 H units of a B No. 9 ray. To demonstrate the accuracy of the method, the speaker had treated two of the areas, while Dr. Remier had treated the remainder of the scalp. All the work was done at one sitting. The hair fell out at the end of three weeks and at the time the little patient was presented to the Society, six weeks after the treatment, there was complete baldness. Dr. MacKee said that there had been no erythema and that the hair would grow again, within a few months.

The speaker had just returned from a trip to the middle West and while in St. Louis he was surprised to learn that tinea tonsurans, in the Mississippi valley, was not a troublesome disease. He had been told by Engman and Mook that the affection would yield to the simplest measures. They thought the variation in virulence was due to the different environment. This seemed rather strange, the speaker thought, as tinea tonsurans was the same in Germany, France, England, Canada and many other localities, and the apparently slight change in environment between New York and St. Louis would not seem to be as great as between some of the foreign countries in which ringworm was a common affection.*

NÆVUS VASCULARIS, TREATED WITH CO₂ SNOW, FOLLOWED BY KELOID. Presented by DR. HOWARD FOX.

The patient, L. W., was a girl, 7 years of age, born in the United States of German parents. She presented an oval port-wine mark of the light red variety, two and a half by one and a quarter inches, on the left cheek. She had been treated by a colleague about four months previously with CO₂ snow. According to the mother's statement, half of the area was treated at the first sitting and the remaining half at the second sitting, given about a week later. This was followed by blisters and crusts, which fell at the end of two weeks. About two weeks after this, the entire area was again frozen at one sitting. The reaction consisted of bullous lesions drying to crusts, which did not finally fall until the end of six

* The patient was seen on May 20, 1914; the hair was growing vigorously all over the scalp. There was no sign of the original affection.

weeks. A keloidal scar was then apparent at the lower edge of the patch, about one and a half inches in width, with shorter prolongations at each end, three-eighths of an inch in width, elevated and hard. The duration of the snow applications averaged twenty-five to thirty seconds for each of the three treatments. The crust which remained for six weeks after the last treatment was partially removed by scratching, and bled frequently. The patient was of a fair complexion, with blond hair and light brown eyes. She was sturdy and healthy in appearance.

DISCUSSION.

DR. DADE said that he did not think the condition was the result of the freezing but of some interference with the crust while healing. He had never seen keloid after the use of either liquid air or CO₂ snow. This particular type of nevus, the light colored type, should not be treated, or at any rate a guarded prognosis as to its disappearance should be given.

DR. WHITEHOUSE agreed with Dr. Dade that the keloid was not due to the CO₂ snow. Probably the scabs were disturbed and ulceration followed. Some of the smaller naevi were removable by liquid air and CO₂ snow. At the Skin and Cancer Hospital a very pale, superficial port-wine mark did disappear after not more than five or ten seconds' applications. The larger and deeper colored ones, and even some of those that were not so highly colored, grew fainter, but some of the smaller ones entirely disappeared.

DR. TRIMBLE agreed with Dr. Dade on both points. He had tried the CO₂ snow in a number of instances, but had given up using it on cavernous naevi.

DR. JACKSON thought that port-wine marks were not amenable to congelation. The color might be lessened a little, but not entirely removed. As far as the scar on the patient was concerned, he thought it quite possible that deep freezing plus some secondary infection might cause it, in an individual prone to the formation of scar keloid.

DR. MACKEE said that while in St. Louis he had seen a keloid which had developed upon the chin of a patient who had been treated with CO₂ snow, for a vascular nevus. In such cases the speaker suggested that further traumatism be avoided and that the X-ray be applied.

Relative to the efficacy of CO₂ snow in superficial vascular naevi, the speaker said he had seen an excellent result which had been obtained by Wallhauser of Newark. The patient was a young lady with a port-wine mark of the lower lid and upper portion of the cheek.

From the remarks of preceding speakers, Dr. MacKee said he understood that liquid air and CO₂ snow would not cause a keloid even when there was an idiosyncrasy to this condition. If this were true why should not these agents be employed in the treatment of keloid? The speaker had always been under the impression that any form of traumatism was contraindicated in the treatment of keloid or in patients who showed an idiosyncrasy to keloid.

DR. WINFIELD agreed with Dr. Dade that an uncontaminated CO₂ burn would not produce a keloid. The small port-wine marks on children often disappeared without any treatment. He had not had any results in treating the deeper ones. They may get lighter, but they were never entirely removed, and sometimes they were made worse.

DR. HOWARD FOX said that he had shown the case simply as a keloidal scar following the use of carbon dioxide snow. He was glad that the members did not think the scar was due to the CO₂ snow, but rather to some traumatism or interference with the crust. He was interested to hear Dr. Dade's opinion, that extensive port-wine marks of the pale red variety should not be treated. Dr. Fox said that he had never been able to obtain satisfactory results in the treatment of any kind of port-wine mark. The redness might at times be lessened, but the result was generally worse than the original nevus.

Dr. DADE said he would not hesitate to use the freezing treatment on a keloid, provided it were a purely scar type, not the idiopathic keloid. He had treated a scar keloid with CO_2 and removed it entirely.

Dr. WINFIELD asked if Dr. Dade would use more CO_2 to remove the keloid which was presented.

Dr. DADE replied that one would have to eliminate the possible idiosyncrasy first.

MULTIPLE BENIGN SARCOID. Presented by Dr. TRIMBLE.

The patient was a woman, 28 years of age, born in Roumania. The condition had existed for nine years. It began by the formation of a small, pinkish, somewhat livid, slightly elevated nodule in the centre of the forehead. Following this, several new lesions made their appearance in the same locality, and one appeared on the left side of the face, about the angle of the jaw. This last lesion increased in size slowly, was only slightly infiltrated, and was quite flat. At the time of presentation it was the size of a silver dollar, with distinct atrophy in the centre. The Wassermann reaction was negative.

DISCUSSION.

Dr. HOWARD FOX thought that sarcoid was the most probable diagnosis of these pale-red, subcutaneous nodules which had existed so long without ulceration. The lesions resembled those in the case reported by his father, Dr. George Henry Fox, in conjunction with Dr. Udo J. Wile. If the diagnosis of sarcoid were correct, he would expect to see some pigmentation.

Dr. MACKEE said that the lesion on the forehead was nodular, but the nodules were rather large and soft for a typical sarcoid. In the lesion on the cheek, however, there were several small, hard nodules. The atrophy and dilated veins demonstrated in this case were not unusual in sarcoid. The speaker suggested that the disease might have been modified by treatment. The patient, for instance, stated that she had received X-ray treatment some years ago, which would, perhaps, account for the atrophy and telangiectasia associated with the cheek lesion. The atrophy was rather superficial and suggested the result of a radiodermatitis rather than the atrophy following sarcoid. The speaker thought that the disease was strongly suggestive of the superficial sarcoid of Boeck, occurring in plaques. He hoped that Dr. Trimble would be able to make a histological examination.

In regard to treatment, the speaker said that arsenic had proven efficacious in Boeck's sarcoid and the tuberculin had been successfully employed in the Darier-Roussy type of the disease.

Dr. WISE suggested that it would be well to have a tuberculin test made. If that were positive, it would be confirmatory of the diagnosis.

Dr. HOWARD FOX mentioned a case of sarcoid that he had treated with the Finsen ray, a method that had been only partially successful. The patient had finally been treated with CO_2 snow by Dr. Fred Wise, the lesions being removed, with a splendid cosmetic result. He suggested that the CO_2 be tried in this case.

LENTICULAR CARCINOMA. Presented by Dr. TRIMBLE.

The patient was a woman, aged 33, born in the United States. The duration of the condition was two years. Two years ago, a small nodule was noticed in the breast. The breast was removed and recurrence followed in about eight months' time. Radical operation was then performed. The condition remained quiescent for about a year, when the scattered nodules began to develop.

LICHEN RUBER ACUMINATUS. Presented by Dr. TRIMBLE.

The patient was a young man, 21 years of age, born in the United States. The condition had existed for five years. He had had a so-called attack of eczema nine years before, but that had healed readily. The present lesion was distinctly follicular on the trunk and was erythematous on the face. There was a great amount of pityriasis associated with the lesion.

DISCUSSION.

Dr. WHITEHOUSE said that this case had puzzled him very much. A year or so ago the patient had the same peculiar discoloration about the face, and had an acute eruption, which suggested a dermatitis herpetiformis in its grouping about the face, neck and chest. The man had taken a great deal of arsenic. He recovered, and had no evidence of that condition when presented, excepting the pigmentation. The lichenoid condition was a rather puzzling one. Time will probably reveal what the process was, but at present no satisfactory diagnosis could be made.

Dr. DADE said that it certainly was not pityriasis rubra pilaris.

Dr. HOWARD FOX agreed with Dr. Dade that there were not enough positive symptoms to make a diagnosis of lichen ruber acuminatus. There were no typical acuminate papules and no horny plugs on the backs of the phalanges. It seemed to him like a chronic dermatitis from prolonged scratching. A marked feature of the case was the pigmentation. Whether or not that was due to administration of arsenic, it was difficult to say.

Dr. MACKEE agreed with Dr. Howard Fox that the condition was possibly one of lichenification produced by scratching. He called attention to the mottled pigmentation on the patient's back, which had the appearance of arsenical pigmentation.

Dr. TRIMBLE said that there seemed to be a general disagreement with his diagnosis. He did not pretend to be infallible, and had rather anticipated that some of the members would disagree with the diagnosis. He had, however, presented the case with a question mark after it. So far as he personally was concerned, the question mark could be removed, as he felt almost convinced that it would turn out to be a typical case of lichen ruber acuminatus in time. The man had myriads of papules on his abdomen—horny, acuminate papules—and he believed they would go on to a typical development. The man had had the disease for five years, and had never had a vesicle in his life. It was all follicular, all discrete, and all the lesions were acuminate.

TUBERCULOSIS VERRUCOSA CUTIS OR BLASTOMYCOSIS? Presented by Dr. TRIMBLE.

The patient was a young man, 19 years of age. The duration of the condition was seventeen years. His health had always been exceptionally good, except for the skin lesion. The lesion in question was about six by ten inches in size, situated on the left buttock; it was warty and infiltrated, and there were areas filled with small cutaneous abscesses. It had made an attempt to heal in the centre. The lesion had been treated with X-rays for a year, without result.

DISCUSSION.

Dr. WHITEHOUSE said that it certainly looked like tuberculosis verrucosa cutis, but that he was inclined to think that it was a blastomycosis.

Dr. MACKEE said that the large numbers of pus foci would suggest blastomy-

cosis. He doubted, however, if the case could be diagnosed without careful bacteriological, serological, and histological study.

DR. JACKSON said that the general appearance of the lesions and their location on the buttock in the neighborhood of the anal region were strongly suggestive of tuberculosis. As cases of dermatitis blastomycotica often bore a striking resemblance to tuberculosis, an appeal must be made to the microscope, and if the blastomyces were found the diagnosis would be made.

DR. SCHWARTZ was inclined to agree with the diagnosis of tuberculosis verrucosa cutis. The lesion went back almost to the anus. It might be connected with an ischio-rectal fistula, which was nearly always of tuberculous origin.

SYPHILITIC LESIONS OF THE THROAT, TUBERCULIDE OF THE BODY. Presented by DR. MACKEE for DR. FORDYCE.

This patient, W. B., had been presented to the Society on several occasions. The boy was 7 years of age and he had been under observation off and on for five years. The child presented hereditary stigmata of syphilis and had, also, suffered from tuberculous dactylitis and other bone lesions of both syphilitic and tuberculous origin. In addition, he had had suppurating tuberculous glands of the neck and the axillæ. Positive Wassermann reactions had been obtained from the blood of the patient, and from that of his mother, father and brother. At one time his brother, a child of four, exhibited syphilitic condylomata of the anal region. The patient gave a strongly positive von Pirquet reaction.

When presented to the Society there was a generalized eruption of grouped necrotic papules which had been occurring in crops for a period of three years. The individual lesions required from one to four months for evolution and involution and they left pitted scars.

The most interesting feature of the case was the eruption of the throat and mouth. Scattered over the hard palate and fauces, were six slightly elevated, whitish, sharply margined, round lesions, ranging in size from a split pea to a ten-cent piece. They resembled the moist papules of syphilis, so common around the anal region. The lesions had been present for only three weeks and were not very painful.

The speaker considered the throat lesions to be syphilitic papules and the skin lesions to represent a tuberculide.*

DISCUSSION.

DR. WHITEHOUSE agreed with the diagnosis.

DR. HOWARD FOX considered that both syphilis and tuberculosis were present in the case. He thought that the elevated lesions on the palate corresponded to moist papules found at the muco-cutaneous junctions.

DR. TRIMBLE said that although he had never seen a case like this, he could see no reason why there should not be flat condylomata in the mouth.

DR. JACKSON agreed with the diagnosis.

DERMATITIS FACITIA. Presented by DR. MACKEE for DR. FORDYCE.

The patient, a neurotic type of woman, 38 years of age, was under observation at Dr. McMurtry's service at the Vanderbilt Clinic. She was married, white, a native of the United States and, as an occupation, did her own housework. The condition for which she asked advice began one year ago. The patient stated that she never had had lesions of the skin previous to this time. There was no definite history of syphilis.

* The throat lesions disappeared as a result of one intravenous injection of salvarsan. The body lesions were not affected.

She exhibited lesions on the anterior and posterior surfaces of both arms and both shoulders, over the scapulæ and on the chest. The eruption consisted of irregularly round, oval and linear lesions ranging in size from a dime to a silver dollar. There was no definite grouping, the lesions being scattered irregularly over the affected areas. The patient stated that the lesions would appear suddenly as a vesicle, then become pustular, then crustaceous. The speaker had seen lesions in the pustular stage, but he had never encountered a vesicle or bulla. The woman complained of pruritus and stated that the lesions were painful in the early stage of their development. It was noted that the lesions were much more numerous over the right than over the left scapula and in accord with this was the fact that she was left handed. In addition, the lesions on the back were more irregular in outline than those on the arms and chest.

When presented to the Society there were a number of pustular and crusted lesions scattered over the areas mentioned. There were also numerous non-pigmented scars, the remains of former lesions. The lesions were suggestive of a burn from a caustic, as when they first appeared they were surrounded by considerable inflammation. This was followed by active and limited ulceration with rapid spontaneous repair. There was not the sluggish, indolent ulcer that would accompany a bacterial infection.

The Wassermann reaction of the spinal fluid and of the blood was strongly positive. There were, however, no cells in the spinal fluid. The patient exhibited unequal pupils which, of course, were suggestive of syphilitic involvement of the nervous system. The speaker regarded the skin lesions as artificial and Dr. Fordyce had suggested that the possible syphilitic involvement of the nervous system might have so altered the patient's mentality as to lead to self-mutilation.

DISCUSSION.

DR. WHITEHOUSE said that the diagnosis could be determined by putting the woman in the hospital and taking note of the case there.

DR. KINGSBURY said that he would make a "straddle" diagnosis. Probably both the disease and the condition entered into the question. The lesions on the back were probably cicatrices of old syphilitic lesions and much of the superficial excoriation resulted from scratching. The woman dug into herself and made these lesions. There was no doubt of her having had syphilis.

DR. HOWARD FOX agreed with Dr. Kingsbury and did not see how a diagnosis of dermatitis factitia could be made in a case like this. There were practically no linear lesions, such as would have been produced if the patient had used carbolic acid. The eruption was decidedly symmetrical on both arms and somewhat so over the back and chest. He did not see how a malingerer could produce such a condition.

DR. MACKEE said that he did not agree with the opinions expressed by his colleagues. The lesions to his mind did not suggest syphilis. The evolution was too rapid. There was no pigmentation. The lesions and the scars were too irregular in size and shape. An ulcerating destructive syphilis meant a late syphilis which would not be symmetrical as in this case. Again, syphilis, with as many lesions as presented by this patient, would not be likely to be limited to the arms, chest and shoulders.

The speaker was firmly convinced that the patient was a malingerer. The interesting point was the influence of the syphilitic involvement of the nervous system as an indirect ætiological factor.

NECROTIC GRANULOMA WITH CHRONIC SYNOVITIS. Presented by DR. SCHWARTZ.

DR. SCHWARTZ presented the case as a tuberculide which had been present for three years. When presented, there were only a few active lesions, but there

were innumerable typical scars scattered all over the body. The physical examination was entirely negative, with the exception that the man had an unusual complication in the presence of a chronic tuberculous synovitis of the extensor tendons of the hands and flexor tendons of the knee. There was no tuberculosis of the lungs, but the von Pirquet test was positive.

BAZIN'S DISEASE. Presented by DR. MACKEE FOR DR. FORDYCE.

The patient, a married woman of 30, was from Dr. Wise's service at the Vanderbilt Clinic. There were deep-seated nodular lesions on the posterior and lateral surfaces of both legs below the knees. The lesions ranged in size from a dime to plaques the size of a palm. The overlying skin was a dark-red color. There was no ulceration. The patient complained of pain. There was no history of syphilis and the Wassermann reaction was negative. The duration of the affection was two years.

CASE FOR DIAGNOSIS. Presented by DR. TRIMBLE.

The patient, a boy, had two or three small lesions on the glans penis, scaly and slightly infiltrated. He had never had any lesions on the body. The condition had existed for six years. Under treatment, the scales came off and left slightly infiltrated red spots, which scaled up again. It resembled both psoriasis and seborrhœic eczema.

DISCUSSION.

DR. JACKSON said that he had had a similar case in private practice. That was in the days before anything was known about the Wassermann reaction, so that test could not be used to help in the diagnosis. He did not know what the disease was in his patient, and he did not know what to call it in the case presented. !

DR. TRIMBLE said that at the clinic a diagnosis of seborrhœic eczema had been made. The patient had no history of lues, and the Wassermann test was twice negative.

CAVERNOUS ANGIOMA IN AN ADULT. Presented by DR. MACKEE FOR DR. FORDYCE.

DR. MACKEE said that at the December meeting of the Society he had presented a case of cavernous angioma in a child, where the lesion was undergoing spontaneous evolution. There followed an interesting discussion as to whether or not all cases or nearly all cases of this affection disappeared spontaneously. It was for this reason the speaker presented a man of 35, who had a palm-sized cavernous angioma of the forehead, which had been present since birth and which had received no treatment. It was a question, the speaker said, whether or not this type of nævus, when occurring in infancy, should be treated.

DISCUSSION.

DR. HOWARD FOX said that this was one of the exceptions that proved the rule that cavernous angiomata disappeared spontaneously. The proof of the assertion that such angiomata disappeared without treatment lies in the fact that these lesions were common in children and rare in adults.

LUPUS ERYTHEMATOSUS. Presented by DR. MACKEE FOR DR. FORDYCE.

The patient, a man of 29, had been referred to Dr. Wise's service at the Vanderbilt Clinic by Dr. Lipset. There was a lesion of two years' duration

behind the left ear. When the man first appeared at the clinic the lesion was pustular and crusted and simulated an impetigo or an eczema of the impetiginous type. There was a history of constant vesiculation, pustulation and crusting, during the entire period of two years. There was also a history of the constant application of ointments. All treatment was discontinued for a period of three weeks in preparation for presentation to the Society.

When presented to the Society there was a silver-dollar-sized, dry, scaly, violaceous, atrophic lesion, which warranted a diagnosis of erythematous lupus.

NEW YORK ACADEMY OF MEDICINE, SECTION ON DERMATOLOGY.

Regular Meeting, Nov. 5, 1913.

WILLIAM B. TRIMBLE, M.D., *Chairman.*

RHINOPHYMA. Presented by DR. KANE.

Mr. W. H., 67 years old. He was born in Germany and came to this country when four years of age. Occupation, barber. His work had never been out doors, but he acknowledged that he had always imbibed alcoholic drinks freely. He gave no previous history of acne. Eight or nine years ago he began to notice his nose increasing in size, growing more rapidly within the last two years, showing pendulous nodules at the end and on both sides, as indicated in the photograph before operation. He was operated on July 8, 1913, at the Post Graduate Hospital under a general anæsthetic.

Dr. HEIMANN said that he had seen similar excellent results in Vienna from treatment by ablation. The cut did not go quite to the bottom of the crypts, and thus enough epidermis cells remained intact to start a new covering.

Dr. LUSK congratulated Dr. Kane on the results he had obtained. He found that nothing short of an operation was at all satisfactory in this condition.

Dr. TRIMBLE said that he had seen three or four of Dr. Kane's patients, in all of whom the results had been as good as in this man.

URTICARIA PIGMENTOSA. Presented by Dr. BECHET.

The patient was a boy, 6 years of age. He had had his eruption for the past three years. He presented for examination a large number of pigmented lesions, mostly confined to the trunk, some of which on rubbing developed into wheals. Here and there a small wheal could be made out. A lesion was also to be seen on the lip.

Dr. OULMANN said that the lesion on the lip seemed to be suspicious of lues.

Dr. AITKEN said that he had obtained a history of traumatism which accounted for the lesion on the lip.

Dr. LUSK said that the general adenopathy in conjunction with the lesion on the lip were very suspicious of syphilis. The history was not very definite. The lesions on the body were probably those of urticaria pigmentosa.

Dr. BECHET, closing the discussion, said that the lesion on the lip had been present that day only, while the lesions on the body had been there for several months. The enlarged glands were due, he thought, to the child's malnutrition and anæmia.

CASE FOR DIAGNOSIS. Presented by DR. BECHET.

Mrs. A. K., 47 years old, first noticed the eruption five months ago on the breasts, wrists and face. Three months later, it spread to the rest of the body. She said the eruption did not itch, but complained of an occasional burning sensation. She presented for examination a considerable number of large, rounded, excoriated lesions, scattered generally over the arms, trunk and legs. There was no grouping. Here and there some pigmentation and tendency to scar formation were observed. The Wassermann reaction was negative. The patient was a neurotic.

DR. Lusk said that it was a case of dermatitis factitia, as the lesions occurred only in places accessible to the patient's hands.

DR. MacKEE and DR. AITKEN said that this was a case of dermatitis factitia. The lesions were all secondary to scratching or some other traumatism.

DR. TRIMBLE said that he had thought of malingering in this patient and that the lesions were undoubtedly produced by scratching, although he was not certain that some lesion like urticaria had not preceded the scratching.

LUPUS ERYTHEMATOSUS OF THE EARS. Presented by Drs. MacKEE and WISE.

The patient was a man, 35 years old, married, from Dr. Fordyce's clinic. There was no history pointing to syphilis and his wife had had no miscarriages. Her children were healthy. The patient had a weakly positive Wassermann reaction. On the shells of both ears there were a number of dusky-red, scaly plaques, some of which showed marked atrophy in the centre; others were infiltrated and not sunken below the level of the surrounding healthy skin, closely resembling a syphilitic lesion. On the cheek there was a small scar, apparently from a previously treated lupus erythematosus, while the scalp showed an active lesion of the latter disease.

DR. MacKEE said that the appearance was typical of lupus erythematosus when presented. When first seen by him the lesion at the inner canthus was like an involuting ulcer, the lesions on the ear were nodular, like lupus vulgaris, those on the scalp looked very much as they did when presented. The Wassermann reaction was a doubtful positive. The histological examination was doubtful, but favored syphilis. There had been some improvement under treatment by mercury, but the improvement was neither rapid nor marked. The case was probably one of lupus erythematosus.

ICHTHYOL IDIOSYNCRASY (?) Presented by DR. WISE.

Mr. S. F. G., 25 years old, with a negative family and personal history. He consulted the exhibitor on Oct. 28, 1913, for a moderate grade of rosacea, which had been present the past five or six years. The general health had always been excellent. Together with the usual external remedies, he was directed to take 8 drops of ichthyol (Merck) in gelatine capsules, after each meal. After the second day of this medication, that is, after having ingested 48 drops of the ichthyol, the patient exhibited a generalized, papulo-macular, intensely pruritic eruption—a severe form of papulo-macular dermatitis, involving nearly the entire integument, with the exception of the soles of the feet and the face and scalp. On November 4, there was involvement of the shells of the ears and the patient presented a rather severe pharyngitis. The temperature at the time was 100°F. The bowels had moved regularly during the entire course of the disease. The external treatment to the rosacea consisted of lotio alba, which had been applied but one night. One specimen of urine, examined on November 4, was free of albumin and sugar. It had not yet been examined for sulphates. Careful questioning as to the possibility of the dermatitis being due to other factors than the ingestion of the ich-

thyl failed to bring out any other ætiological factor. (Only two cases of ichthyl idiosyncrasy had been reported to date, in cases where the remedy was ingested. See McMurtry, "Ichthyl," *Jour. Cutan. Dis.*, Oct., 1913, xxxi, No. 10, p. 775).

Dr. MACKEE said that the patient gave a perfectly clear history. He had no similar attack before; there was no other ætiological factor found, even by careful inquiry. The eruption had developed two or three days after the ingestion of ichthyl and might be due to the drug itself or to some toxine of intestinal origin.

Dr. LUSK said that he had seen many patients with digestive disturbances after the ingestion of ichthyl and that an indigestion so produced might have been the cause of the erythema in this case.

Dr. WISE said that the patient was willing to take ichthyl again after the eruption had faded, as a test for idiosyncrasy.

CASE FOR DIAGNOSIS. Presented by Dr. BERK.

Mr. A. S., 23 years old, had had several recurrent attacks of factitious and ordinary type of urticaria, followed by the irregular appearance of very itchy and deeply red spots of a quarter to a half dollar size, with a hæmorrhagic tint. These persisted for about ten days to two weeks, resolving gradually with a relief from the previous itching and burning, into brownish, slightly scaly spots, retaining the pigmentations for prolonged periods. The mucous membranes were free. The case may have been one of an atypical form of urticaria recidiva hæmorrhagica, or a case of urticaria pigmentosa in an adult.

Dr. PAROUNAGIAN said that he had seen the patient at Dr. Pollitzer's clinic at the Post-Graduate Hospital last summer, with typical lesions of erythema iris. The lesions were concentric rings, purplish in color, located on the backs of the hands, buttocks, etc., and were pruritic. Under the administration of salicylate of soda internally and calamine lotion with 1% phenol locally, the lesions almost entirely disappeared.

Dr. BERK said that he considered it probably a case of urticaria perstans in an adult, followed by pigmentation analogous to urticaria pigmentosa in infants.

LICHEN PLANUS. Presented by Dr. BERK.

A woman, 52 years old, supposedly well until two weeks ago, when, accompanied with severe itching, a profusely scattered, partly discrete, partly confluent, purplish red, general eruption broke out all over the body except the head, forming irregular lines and patches. The flat, polygonal, shiny, elementary lesions were predominant, only on the upper extremities, particularly the flexor surfaces; more roundish lesions were visible, with a distinctly depressed centre. The buccal mucous membranes showed coalescent patches, also the roof of the mouth. Under the administration of $\frac{1}{8}$ of a grain of biniodide of mercury, t. i. d., the itching was very quickly relieved, and rapid involution of the eruption set in.

Dr. LUSK said that he had gotten the best results in this disease by the use of large doses of mercury, e.g., $\frac{1}{4}$ grain of biniodide of mercury three times a day.

LUPUS VULGARIS ON FACE AND BODY WITH TUBERCULIDES ON THE LOWER LIMBS. Presented by Dr. BERK.

Mr. M. D., 28 years old, married, was the father of two children. He had had for years a silver-dollar sized patch of lupus on the left cheek, a smaller one over the right ankle, both still with active interspersed nodular enclosures, principally on the border lines. Two years ago, numerous dime sized, bluish, and reddish-brown infiltrations broke out irregularly on the lower limbs, a few on the upper ones. In progress of healing some left depressed, whitish scars behind; others were still in an active state of soft proliferation.

DR. MACKEE said that the patient certainly had lupus vulgaris, but that he had never seen the individual lesions of tuberculide lasting as long as a year. The disease came in crops, each lesion lasting a comparatively short time, whereas in this case papules had been present on the knee for over a year.

LUPUS VULGARIS DISSEMINATUS. Presented by DR. BERK.

Three brothers, of whom two were presented, with but two or three years' difference in their ages, spent their infancy in poor economic and hygienic conditions, sleeping together in one bed for years. The oldest, still living in Russia, was the first to show a lupus nasi, the two other brothers following soon with lupus patches on the ears and the neck; these were followed gradually by new foci, some on symmetrical regions of the lower and upper limbs, healing up irregularly in the centre with atrophic scars, involving the whole thickness of the skin, at some points extending into the underlying soft tissues, even to the periosteum of the bones. The edges of some serpiginous patches still showed raised, new nodular extensions. The general health of the two brothers was fairly good, though they were pale and had enlarged glands in the groin and the neck.

ERYTHEMA NODOSUM. Presented by DR. HEIMANN.

Mrs. E. P., 36 years old; married 17 years. She had had a miscarriage in August, 1913. Since that time she suffered with sore throat and general lack of health. The cutaneous disease appeared three weeks ago; it began with a painful bruise-like lesion on the right thigh, followed by another on the left thigh and two more on the left shin. The pain was disappearing. She presented also, a systolic murmur and enlarged tonsils.

DR. BERK said that clinically there was no inflammatory exudate in this case, the hæmorrhagic character being most conspicuous. It was therefore probably a case of morbus maculosus Werlhoffii.

DR. OULMANN said that there seemed to be very little erythema to be seen. He was reminded of Ledermann's case, where colon bacilli could be cultivated from this type of lesions.

DR. WALLHAUSER thought this case was rather a variety of purpura. He had a similar case to the one shown, that ran a course of about two years with large areas of purpura, developing at irregular intervals, on various parts of the body; there was an elevation of temperature during almost this entire period. The patient finally succumbed, with the development of general anasarca. The diagnosis in this case was septic endocarditis.

DR. HEIMANN said that the patient had a miscarriage last spring and was weak afterwards. At the onset of the attack of erythema nodosum, she had a soft systolic murmur, general pains and a pharyngitis. He considered it a case of erythema nodosum on account of the large nodule in the centre of each lesion. The relation between this disease and the morbus maculosis Werlhoffii was very close and in many cases the separation into different groups was a case of hair-splitting. He had seen erythema nodosum occurring on the thighs and had seen as few as two or three and as many as twenty lesions in a single patient.

CASE FOR DIAGNOSIS. Presented by DR. TRIMBLE.

Mr. J. B., 63 years old. The patient had an eruption which began about two and a half months ago on the right arm; two weeks later it spread to the back, groin and thighs. He presented for examination several large patches of eruption, circinate and sharply margined, with bluish-red centres. The Wassermann reaction was negative. Smears were negative. The borders of the lesions apparently consisted of dried and drying vesicles.

DR. HEIMANN thought that this was a case either of syphilis or of a fungous infection, probably the latter. It was very closely related to erythrasma. The raised border was due in part to the virulence of the organism and in part to the susceptibility of the patient.

DR. BECHET agreed with Dr. Heimann that the lesions were due to some parasite. He had seen a similar case in which the microsporion was discovered after three or four examinations.

DR. LUSK said that this was possibly blastomycetic dermatitis. It was certainly a fungous trouble of some kind.

DR. TRIMBLE said the patient had been under observation for two weeks. Most of the lesions looked at first very much as they did on presentation. Those on the back had at one time shown a number of large and small pustules, some of which had dried to form yellow crusts like those of impetigo. The biological report showed a mild superficial inflammation of the skin. There was nothing characteristic in the smears. When shown before the New York Dermatological Society many of the members had thought it a case of syphilis. The man had had a similar condition in the right axilla, three years ago.

REPORT OF A DEATH FOLLOWING THE USE OF SALVARSAN. Presented by DR. LAPOWSKI.

Miss S. B., an 8 year old girl, was in good general condition when she came to the Good Samaritan Dispensary on July 8, 1913, with nodular gummata of the right knee, of one year's duration. The mother of the patient had been under treatment at the dispensary for gummata for two years previously (since 1911).

July 9, 1913, the child received an intramuscular injection of calomel, 0.2 (urine previously examined was negative).

July 14, 1913, potassium iodide was administered.

July 30, 1913 (20 days after calomel injection), intravenous injection of neosalvarsan, 0.2 with no untoward effects.

August 4, 1913, mercurial inunctions.

August 11, 1913 (12 days after the first injection), second intravenous injection of neosalvarsan. This injection was prepared and administered in the same manner as the first; all aseptic precautions were observed, the apparatus was sterilized in freshly distilled water, then dosage of neosalvarsan (equivalent to 0.3 salvarsan) dissolved in 50 cc. sterile, freshly distilled water was given. The solution had been prepared to be injected into another patient, a woman, but when about 10 or 15 cc. of the solution had been injected into her, she became restless, complained of pain, and moved about, thereby removing the needle from her vein, and the injection was promptly discontinued. Immediately thereafter, the remainder of the solution, about 35 or 40 cc., was injected into the little girl. The child stood the injection splendidly; she complained of no pain; the inflow was very satisfactory and when she left the table, her condition was so good that she was demonstrated to the patient for whom the injection was originally intended, to show her how a mere child could stand this injection, whereas this adult woman refused to have it done, claiming that she could not stand it.

August 12, 1913, the mother reported that during the first six hours after the injection, the child felt perfectly well. About six hours after the injection, the child began vomiting, and vomited several times during the night; the following morning, the child felt better.

August 13, 1913, 48 hours after injection, the child came to the dispensary with her mother. The child looked pale, nervous and frightened (afraid of another injection), but quieted after being reassured that no more injections were contemplated. Slight muscular twitching around the right mouth corner was noticed at this time, but the significance of this symptom escaped notice. Her

vomiting had ceased, appetite was good, and she was advised to remain quietly at home.

About 6 p.m., the speaker received a telephone call from Dr. Katz, informing him that he had been called to see the patient, and found her unconscious, in convulsions, and unable to recognize anybody around her. Dr. Breiter, Dr. Goldberger and the speaker went to the patient and found that after a high saline enema the child had brightened up and was cheerful. Later in the evening, the convulsions recurred, and about 11 p.m., the child was removed to Beth Israel Hospital. Her condition while in the hospital, as reported by the medical staff, was: "a well-developed, fairly well-nourished patient, unconscious, did not respond to orbital pressure, made slight crying sounds; breathing irregular and diaphragmatic in character. On expiration, cheeks puffed out and bubbles of saliva blown out. Marked cerebral tache. Skin warm and dry. No rigidity of neck. Pupils equal, reacted sluggishly to light. Bilateral internal strabismus, more marked on right side; marked conjunctivitis. Heart and lungs negative. Abdomen held rigid, especially on right side. No masses or fluids could be felt. Extremities—slight flexor spasm, no oedema. Reflexes—markedly exaggerated, especially on right side; marked Babinski on left side, not so marked on the right. Slight suggestion of clonus. Kernig sign absent."

Convulsions were frequently repeated, at first at intervals of 20 minutes, increasing rapidly in frequency up to intervals of 2 to 3 minutes. During the convulsions, child's head turned toward the right, eyes open and eyeballs moved around. There developed a marked bilateral nystagmus. Movement progressed on right side of the body which was in a state of clonic contraction. The right forearm moved up and down rapidly, but the right lower limb became absolutely stiff and extended. The big toe moved up, the small toes down. Soon after the convulsions, the knee jerks and Babinski reflexes disappeared. From beginning to end, there was marked twitching of facial muscles, and the head turned from side to side. A general anesthetic was necessary to stop the convulsions. This condition continued with slight remissions at intervals during the next day, until about 4 p.m., when the patient died. No autopsy was performed.

The pathological laboratory report showed no albumin or casts in the urine; but did show arsenic, present in both urine and cerebro-spinal fluid.

MANHATTAN DERMATOLOGICAL SOCIETY.

Regular meeting, January, 1914.

DR. D. L. SATENSTEIN, *Chairman.*

ECZEMA WITH BEGINNING LICHEN PLANUS. Presented by DR. OCHS.

The patient was a colored female child, 3 years of age. There was a grouped vesiculo-papular rash present over almost the entire body, which Dr. Ochs called an ordinary eczema, but unlike the ordinary type, it did not itch much. There were some lichen planus papules on the arms, waist and some on the backs of the ears. The lesion back of the left ear was distinctly lichenoid, showing the square-topped, purplish papules with depressed centres. He regarded this case as one of beginning lichen planus. The duration of the lesions had been three weeks. This case was presented on account of the lichen starting with vesicles.

DR. Pisko said he thought the case was one of lichen planus.

Dr. MacKEE considered the case one of follicular eczema.

Dr. WISE said he would call this case one of follicular eczema of the type described by Darier. He did not think any of the lesions had the characters of lichen planus.

Dr. SATENSTEIN said that the so-called follicular eczema of Darier was another name for keratosis pilaris; nothing of the kind was present in this case. The infant presented an ordinary eczema with beginning lichenification.

LUPUS HYPERTROPHICUS. Presented by Dr. GOTTHEIL.

The patient, a negro boy, 13 years old, had had his affection for several months, the hypertrophic growth beginning on the tip of the nose and spreading on to the alæ and the adjacent skin. At that time the fungating mass was spreading very rapidly; the entire left ala had become affected in the last three weeks. It was taken at first for a frambesiform syphilide, but salvarsan injections had no effect on it, and the Wassermann was negative. Biopsy showed cutaneous tuberculosis. The patient was in the rhinological ward and was shown by the courtesy of Dr. Dougherty. The speaker asked if the X-ray would be efficacious in such a case.

Dr. MacKEE said that the X-ray was indicated in this case and he thought the lesion could be made to disappear with one application. The X-ray, the speaker said, was very efficacious in the hypertrophic and ulcerative types of the disease, but was useless in the flat, atrophic type, with deeply embedded nodules of the apple-jelly type.

ERYTHEMA MULTIFORME. Presented by Dr. BECHET.

Mrs. S. P., 30 years old, had had several similar attacks of the disease every year, for the past twelve years. This attack began four months previously. When first seen, she presented for examination large areas of circinate, crusted lesions on the arms and legs, with markedly raised borders. A number of the lesions were ringed and distinctly vesiculo-bullous. The lesions were not superficial, the deeper layers of the skin being involved. The Wassermann reaction was negative.

PSORIASIS OF THE FACE. Presented by Dr. GOTTHEIL.

The patient was a female, 18 years old, with a general psoriasis, remarkable for the fact that two-thirds of the facial area was occupied by a more or less seborrhœal type of the eruption. Such extensive involvement of the face was rare.

CASE OF TUMORS OF THE SKIN OF THE TRUNK. (Presented for Diagnosis at the Previous Meeting.) Presented by Dr. GOTTHEIL.

The diagnosis in this case was still unsettled. A number of biopsies had been made by Dr. Larkin for the Pathological Department of the City Hospital and by Dr. Satenstein; they agreed one with another absolutely, but were entirely incomprehensible from the clinical standpoint. Clinically, the very numerous, large pea to bean sized, distinctly erythematous permanent tumors were inflammatory; the patient was syphilitic, with a "4 plus" Wassermann, and had had, during the Fall, a papular eruption interspersed among the larger tumors, which had disappeared under treatment. Numerous salvarsan injections, and much mercury, however, had had no effect on the permanent eruption. The clinical diagnosis had been: (1) Tubercular syphiloderm; (2) Mycosis fungoides; (3) First stage of atrophia maculosa. The biopsies showed only hyperplasia of the collagenous bundles; absolutely no cellular infiltration. Against the first

diagnosis were the microscopic findings, the entire inefficacy of treatment, and the persistence and slow growth of the lesions for at least six months. Against the second were the biopsies, and the absence of marked itching, also the uniformity of the lesions. Against the third diagnosis was the clinical picture; a multitudinous tumor eruption was certainly not the usual thing in beginning macular atrophy. The microscopic findings supported, if anything, the last diagnosis; and there were perhaps slight evidences of beginning atrophy in some of the tumors. The diagnosis must still be reserved.

DR. GEORGE HENRY FOX said that, leaving the microscopical findings out of the question, this case reminded him very much of two cases of mycosis fungoides which he had seen, and that the tumors of both were grouped just like those in Dr. Gottheil's case. The speaker said the diagnosis could probably be determined in a short time.

DR. SATENSTEIN said that he had put the sections through all the special stains but found only hypertrophy of the collagen; absolutely no evidence of any inflammatory process whatsoever. This would absolutely rule out either mycosis fungoides or syphilitic lesions. Mercury and repeated intravenous injections of neosalvarsan had had no effect, as far as the lesions were concerned.

DR. MCMURTRY said it might prove interesting to try large doses of precipitated sulphur in this case, and that he believed it might help her.

EPITHELIOMA CURED BY ONE X-RAY TREATMENT. Presented by DRS. MACKEE and WISE.

The patient, Mrs. G., was an adult, 35 years of age. She was from Dr. Fordyce's clinic. She had had a large epithelium of the cheek which involved the inner canthus of the eye. She had received one massive dose X-ray treatment one year ago. The lesion healed promptly and there had been no recurrence. The scar was soft and there was no ectropion. There was absolutely no visible evidence of the former disease. A photograph of the case taken before treatment was also presented.

PSORIASIS: AUTO-SERUM INJECTIONS. Presented by DR. GOTTHEIL.

This patient, a female adult, was a serum case which had been in the City Hospital before, staying each time at least four weeks. After her serum course she received 3% chrysarobin locally; she had been on the treatment for three days, and was practically well.

DR. PAROUNAGIAN said that if the real virtue of these injections were to be determined, he thought it would be advisable to try them alone, without any local applications whatever.

DR. SATENSTEIN said that this patient had, at first, been started on the inactive serum and later the active serum. The entire subject was in the experimental stage. He would report more fully later.

DR. MACKEE asked if the treatment made the patient more resistant to the disease, or if it made the skin more sensitive to the action of chrysarobin. He also desired to know if the normal skin or only the skin bearing a psoriatic lesion became sensitive to the drug.

SYPHILIS WITH PROBABLE DERMATITIS VEGETANS. Presented by DR. OCHS.

The patient was a small negro child who had been presented to the Society one year previously, for diagnosis. At that time the child showed a sharply defined circular lesion on the left leg which healed under the usual treatment for syphilis. Two months thereafter, within the site of the original lesion, another

one sprung up. This lesion, at first about the size of a dime, was circular, sharply elevated and began to spread peripherally. The child had been on various sorts of anti-syphilitic treatment, wet dressings, etc., but still the lesion kept on spreading. Along the margins of the lesion pus was exuding. Examination for blastomycosis was negative. At the time of presentation, the lesion was about three inches in diameter, with clearing centre and edges elevated, having a very thick and infiltrated border. He presented the case as one of probable dermatitis vegetans.

DR. PAROUNAGIAN regarded this case as one of nodular syphilide and recommended salvarsan treatment.

PERMANENT GUTTATE ALOPECIA. Presented by DR. GOTTHEIL.

This patient presented a permanent alopecia in pea-sized spots over the entire scalp. He had had a tuberculo-pustular syphiloderm of the scalp while under observation, and the resultant alopecia was, in the observer's opinion, entirely indistinguishable from that occasioned by folliculitis decalvans.

PSORIASIS: AUTO-SERUM INJECTIONS. Presented by DR. GOTTHEIL.

This patient, a male adult, with an extensive general psoriasis, had received three injections of his own serum, 60 cc. in all; then 5% chrysarobin was used. There had been a remarkable result, practically a cure of the symptoms, in three days. He had been in the hospital three times previously for the same affection, staying for four to six weeks at a time.

MULTIPLE EPITHELIOMATA. Presented by DR. MACKEE.

The patient was a male adult of 48, who was from Dr. McMurtry's service at Dr. Fordyce's clinic. He presented multiple epitheliomata of the face, of the basal-cell type. The lesions ranged in size from a pinhead to a silver dollar, and they demonstrated the various stages of evolution of the disease. On the forehead there were several pinhead-sized, pearly papules, with a central depression which appeared to represent a follicular orifice. The lesions were so small as to be overlooked, excepting upon very close inspection. On the cheeks were numerous senile keratoses. There were also several typical rodent ulcers, with rolled edges and ulcerated centres, ranging in size from a split pea to a silver dollar.

LUPUS ERYTHEMATOSUS, LIMITED TO THE SCALP. Presented by DR. PAROUNAGIAN.

The patient was a female adult, 44 years of age, born in Sweden. Both her parents were dead, causes unknown to her; she was the only child. She stated that her skin trouble first appeared on the face about two years ago, remaining there only about a month; it disappeared, and shortly reappeared on the scalp and persisted ever since.

When first seen, last August, her scalp was extremely scaly, there was considerable loss of hair, and she complained of severe itching. The condition was most manifest at the temporal, mastoid and occipital regions, the vertex being only slightly involved. There was noticeable atrophy at the centre of each patch. Under sulphur, resorcin and tar applications locally, and quinine and arsenic internally, the condition improved greatly.

SCLERODACTYLIA. Presented by DR. BECHET.

The patient, M. B., was a female adult. The disease began three and one-half years previously, the face remaining free until a year previous. She presented

for examination a marked sclerodactylitis, the distal phalanges having almost entirely disappeared, only a small amount of nail substance remaining. The face was greatly involved, the scleroderma causing considerable rigidity about the mouth. The fingers were markedly contracted.

LUPUS ERYTHEMATOSUS. Presented by DR. OCHS.

The patient was a female adult, 26 years old, who had a butterfly lupus of six years' duration over the nose and cheeks, also a few isolated lesions on the upper eyelids. There were some nodules demonstrable under the pressure on the upper borders of the lupus patch, and to the exhibitor it was a question as to whether or not it was a dual lupus, that is, of lupus vulgaris combined with erythematosus.

SCLERODERMA. Presented by DR. KINGSBURY.

The patient was a large, well-nourished Irishwoman, 73 years of age. The disease was of about two years' duration. Hard leathery patches were first noticed on the abdomen and later the extremities became affected. When before the Society, the woman presented large areas of scleroderma on the arms, back, buttocks and thighs and practically the entire abdomen was involved.

RUPIAL SYPHILIS WITH GUMMA OF THE FOREHEAD. Presented by DR. OCHS.

The patient was a female adult. In November, 1910, she was taken sick with severe headaches. Shortly thereafter, running sores broke out on her body and she became suddenly blind. A physician prescribed hypodermics, ordering her to the City Hospital, diagnosing the case one of lues. On December 3d, 1910, she was given 0.3 gm. salvarsan, and one week after this, she became totally paralyzed, being unable to move hands or feet. She was in bed quite a while, and in January of the next year was given another salvarsan injection, this time 0.4 gm., and dismissed from the hospital with a negative Wassermann. She had come under Dr. Och's observation two weeks previous to her presentation to the Society, and showed a rupial syphilis at the side of the neck, on the forehead, back and legs. These were rapidly yielding to mercury. On the forehead, just above both eyes, a gumma the size of a small egg had formed. The two interesting features in this case were the sudden blindness before the salvarsan, and the paralysis which succeeded the administration of it. Both, however, were temporary. Another feature of interest was the combination of rupial syphilis with gummatous syphilis.

DR. SATENSTEIN said the interesting fact was that when the patient was in the hospital the second time, the Wassermann became negative and had been negative since.

SCROFULODERMA. Presented by DR. PISKO.

The patient, a female adult, presented an abscess on the left arm. It had started as a very large lesion, but although it had drained, had never fully closed up. There was some doubt as to whether it was of a syphilitic nature, and the Wassermann had been negative. There were no physical signs of tuberculosis. The abscess exuded a green pus. The case, the speaker thought, was one of scrofuloderma.

EPITHELIOMA. Presented by DR. WEISS.

The patient, a male adult, presented an epithelioma of the right ala nasi. He had been under treatment, but the disease spread markedly, and when he

first came to Dr. Weiss's clinic, he had a very large ulceration. He was shown to the Society because of the remarkable effect scarlet red salve had upon the lesion. It appeared to be healed and would be watched very closely for any recurrence.

Dr. Pisko said he thought it would be more advisable to curette the lesion before applying the scarlet red and warned against the use of scarlet red without curetting first.

BULLOUS HEMORRHAGIC LESIONS OF THE CHEST AND ARM
FOLLOWING FRACTURE OF THE SKULL. Presented by Dr.
HOWARD FOX.

The patient, Joseph B., was a man 21 years of age, born in the United States, a mechanic by occupation. About fifteen months ago, while at work upon an elevator, the platform fell on his head and fractured the base of his skull. He was taken to Lebanon Hospital and discharged at the end of two weeks. About five days later he became unconscious for a few moments, after which the right side of the face was found to be partially paralyzed. This condition disappeared, the patient thought, in about two months. Since then he had noticed deafness of the right ear and tenderness of the muscles of the left calf. After the appearance of the facial paralysis, the patient began to suffer from a peculiar eruption. This consisted of lesions appearing singly, every week or two, and located exclusively on the left side of the chest and deltoid region of the left arm. These lesions, according to the patient's statement, began as a split-pea sized solid nodule, bluish in color, which on the following day would become surrounded by a light red areola, becoming darker each day. The entire evolution of each lesion consumed about a week. The first lesion appeared on the scalp, all of the others upon the region mentioned. He thought he had had about fifty of such lesions. None of them had been followed by any scarring or pigmentation.

Examination showed a well developed, normally intelligent man in apparently good health. At the site of the deltoid insertion there was a skin lesion consisting of a bluish-black, split-pea sized, firm bulla, surrounded by a hemorrhagic macular area, the size of a dime. According to Dr. John E. Wilson, who kindly made a neurological examination, the patient had apparently suffered from a right-sided facial paralysis, due to a late hemorrhage in the internal auditory canal, involving both the auditory and facial nerves. There was no evidence that he had been paralyzed on the left side of the body, as shown by the deepened skin reflexes. There was merely a contradictory finding, namely, a weakening of the left cremasteric reflex, and the right hypochondriac, which could readily have been a natural variation, having no pathological significance. There was no change in the sensation of touch and pain. The pupils were moderately dilated and almost immobile. The vision, visual fields and fundus were all normal. There was some deafness of both ears, particularly upon the right side. The calf muscles of the left side were tender, the left calf measuring a quarter of an inch more than the right. The skin of this region was normal in appearance. There was nothing in this examination, according to Dr. Wilson, to indicate a relationship between the cutaneous lesions and the fracture of the skull. He also considered the tenderness of the calf muscles to be a localized condition and not dependent upon any cortical lesion, as the symptoms were not subjective but entirely objective. The possibility of the factitious origin of the lesions had been considered. Some tests were made after the presentation to produce similar skin lesions by artificial means, but without success. Various acids and alkalies were applied to the areas upon the left side of the chest and arm, and the skin was also subjected to traumatism. It was impossible to reproduce anything corresponding to the former lesions. The patient was right-handed.

PURPURA. Presented by DR. OCHS.

The patient, a female adult, 20 years old, presented an extensive case of generalized purpura, the duration of which had been two years. During all this time she had been only comparatively free of the affection for one or two weeks at a time, the lesions usually reappearing within a week's time. This case was presented on account of its chronicity and the extensiveness, as both legs up to the abdomen, also both arms and forearms were affected.

SYPHILODERMA. Presented by DR. PISKO.

The patient, a female adult, had been seen by the speaker only once, and was referred to him as a case of psoriasis. There were lesions on the trunk, face and arms, and the initial lesion had appeared about six months previously. Dr. Pisko said the case was one of syphiloderma papulo-squamosum.

CONDYLOMATA ACUMINATA. Presented by DR. PAROUNAGIAN.

The patient was a male adult who had venereal warts of six and one-half months' duration. Three months ago, when he was examined by the speaker, the lesions were confined to the coronary sulcus, while the majority of the lesions were typical venereal warts; there were some flat, purplish patches near the frænum on either side, which were quite suggestive of lichen planus. Itching was practically absent and there were no lesions in the buccal mucosæ. Thorough nitric acid treatment was applied almost weekly, yet the condition persisted. The patient was presented for therapeutic suggestions.

Dr. McMurtry said that a 30% solution of resorcin might be effective in this case, and that he found its use much more satisfactory than salicylic acid.

LUPUS ERYTHEMATOSUS. Presented by DR. WEISS.

The patient was a male adult, 26 years old. He had had favus on the scalp when he was 7 years of age. This favus had gradually healed, showing the characteristic white atrophic places formerly occupied by it and also the wiry hairs surrounding it. About eight months previous to his presentation, he acquired an eruption of lupus erythematosus on and around the site of the scar of his old favus lesion.

RECURRING FOLLICULITIS. Presented by DR. WEISS.

The patient, a male adult, had been shown to the Society some time previously, at which time the speaker diagnosed it as a case of sycosis of the face and inner aspect of both thighs. It resisted treatment until a very severe peeling cure was instituted. The lesions on the thighs had cleared up partially, while the lesions on the face had healed entirely. The case will be followed up and if relapsing again, vaccine treatment will be instituted.

GENERALIZED LICHEN PLANUS. Presented by DR. PAROUNAGIAN.

The patient was a male adult, 50 years of age. The duration was two months; the disease first appeared on the hands, and later developed on the rest of the body. The face was the only part of the body which was not involved. The lesions were present in the buccal mucosa and on the glans penis.

MORPHŒA. Presented by DR. MACKEE.

The patient, a boy of 17, was from Dr. McMurtry's service at Dr. Fordyce's clinic. On the outer surface of the left thigh, there were two irregularly round,

whitish plaques. The two lesions were so close together as to appear like one patch. The larger lesion was three inches in diameter; the smaller one was about half this size. They were both surrounded by a violaceous areola. The tissue was hard and the skin was adherent to the underlying tissue. Upon palpation there was a sharp and well-marked border. The sensation to the palpating fingers was as though there was a layer of hard paraffin embedded in the tissues. The lesion was being treated by the Kromayer lamp.

GENERALIZED ICHTHYOSIS. Presented by Drs. MacKee and Wise.

The patient was a male adult, 25 years of age, from Dr. Fordyce's clinic. He showed a well-marked case of generalized ichthyosis. He was a sufferer from pulmonary tuberculosis.

Dr. ABRAHAMs said that a few years previously, there had been quite a few cases of ichthyosis presented to the Society, and that in each of these cases he had noted pulmonary tuberculosis. Furthermore, that in those cases where the pulmonary condition improved, there was an improvement in the ichthyotic condition. He said he had made these observations about five or six years previously. The speaker made another observation at the same time in reference to some lesions of the skin associated with lesions of the heart. Upon this subject he had seen recently quite a few articles.

REVIEW

OF

DERMATOLOGY AND SYPHILIS.

Under the direction of

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ARCHIV FÜR DERMATOLOGIE UND SYPHILIS.

(July, 1913, cxvi, No. 3.)

Abstracted by JOHN H. STOKES, M.D.

ON THE RELATION OF CHRONIC LUPUS ERYTHEMATOSUS TO TUBERCULOSIS. B. BLOCH AND H. FUCHS, p. 742.

The first subdivision under this title is an extensive review of published opinion and investigation on lupus erythematosus from the standpoint of its possible

identity as a toxi-tuberculide or as a true tuberculosis of the skin, and of its association with tuberculosis elsewhere in the body. Such a review seems to array many of the results of local and general tuberculin reactions in lupus erythematosus, of tuberculin therapy and the like in behalf of the view that the condition is a tuberculous one. The association of lupus erythematosus with recognized tuberculides and true tuberculosis of the skin and with the latter disease elsewhere in the body is, of course, discussed, and the work of Gougerot and others in the production of experimental tuberculosis in animals from the lesions of lupus erythematosus is reviewed. The contribution of the writers to the question consists (1) of a study of the effect of injecting a cell-free extract from the tissues of lupus erythematosus into persons hypersensitive to the toxins of the tubercle bacillus, and (2) the reporting of positive results obtained by them in the production of guinea-pig tuberculosis by the direct inoculation of tissues from cases of lupus erythematosus. The three intradermal injections of extract all resulted in the formation of papules at the site of injection which showed in two cases, histologically, a "tuberculoid" structure, which, the authors feel, justifies the conclusion that the extracts contained tuberculin. Extensive search of a number of sections of lesions of lupus erythematosus failed to disclose anything which in the opinion of the writers showed any trace of the histological architecture associated with a true tuberculosis of the skin. In four cases the authors were able to definitely demonstrate tuberculosis in inoculated guinea-pigs, in two on first inoculation, in one on the second transplantation, and in the fourth case on the third transplantation. The simultaneous presence of demonstrable true tuberculosis in certain of the patients from whom the lupus erythematosus material was taken, with the possibility of a direct transfer of tubercle bacilli accidentally present, appeals to the writers as too unusual an occurrence to constitute a serious criticism on the results. The obviously atypical character of erythematous lupus regarded as a tuberculosis of the skin, is explained by the writers as due to a combination of diminished virulence on the part of the organism and supposed changes in the susceptibility of the affected area. The bibliographical references are very complete.

CHRONIC GLANDERS OF THE SKIN AND JOINTS. R. O. STEIN, p. 804.

This report is based on a case of chronic glanders in man, seen in Finger's clinic, which illustrates the obscure picture which this infection may present. The lesions included indolent serpiginous ulcerations in the skin of the extremities, and purulent involvement of several of the larger joints, the process terminating in *exitus*. Careful bacteriological study of cultures from the pus in the affected joints demonstrated the presence of an organism having the morphological and cultural characteristics of the *Bacillus mallei*. Inoculation of experimental animals produced a peculiar form of glanders, distinguished by its chronicity and the tendency to joint involvement. The organism producing this form of the disease is regarded by the writer as a special strain of the glanders bacillus, and the condition is spoken of by him as a polyarthritidis malleosa.

KERATOSIS FOLLICULARIS SPINULOSA. C. COPPOLINO, p. 841.

This case recalls in some respects the case described by Vignolo-Luttati in the *Archiv für Dermatologie und Syphilis*, cxvi, No. 2, p. 447, reviewed in the *Jour. Cutan. Dis.*, March, 1914, although the condition was less marked in Coppolino's case. The systematic use of a keratolytic ointment produced a gratifying therapeutic result.

A CASE OF SPOROTRICHOSIS. H. HECHT, p. 846.

This case, said to be the first reported from Bohemia, presents an interesting departure from the standpoint of therapy. Hecht employed two vaccines. The first was a salt solution suspension of the organism, heated to 60 degrees Centigrade and preserved with 3 per cent. phenol. The second vaccine was prepared from eleven-day bouillon cultures of the organism, heated one hour at 60 degrees, filtered, the filtrate rubbed up in a mortar and ten cubic centimetres of the filtered bouillon added, with the phenol preservative. The doses varied from one to two cubic centimetres. The first vaccine produced a slight local and but little or no general reaction. The second vaccine, used for the fourth and succeeding injections, produced at the outset a marked local and general reaction. The case made a marked and rapid improvement, but did not remain under treatment long enough, evidently, to secure an absolute cure. The patient returned after several months with a relapse. The author feels that the therapeutic value of the method can only be judged by the results of longer treatment with a stronger vaccine.

STUDIES IN THE NOGUCHI LUTIN REACTION. H. BOAS AND C. DITLEVSE, p. 852.

The writers emphasize the following points:

(1) The possibility of occurrence of positive luetin reactions in non-syphilitics, especially gonorrhœics.

(2) Positive reactions are relatively few in the primary and secondary stages of syphilis.

(3) The luetin reaction was definitely positive, even to pustulation, in all the cases of tertiary lues investigated. The pustulation is a local necrosis and not a bacterial process.

(4) Tardive hereditary syphilis with actual lesions gives a high percentage of positives, but with stigmata only, a low percentage.

(5) In lues tertius and lues hereditaria, the control injection sites showed almost as marked a reaction as did the luetin injection sites.

(6) Reactions simulating the luetin reaction were obtained from syphilitics by the use of gonococcal emulsions and colon bacillus emulsions, even though the patients had not had gonorrhœa or any gastrointestinal disturbance.

(7) From these considerations the writers conclude that the luetin reaction cannot be regarded as yet as a specific immunity reaction, but is merely one of a number of means of showing the hypersensitiveness of the skins of syphilitics. It is, therefore, essentially an irritation phenomenon.

SYRINGOADENOMA PAPILLIFERUM. DR. WERTHER, p. 865.

This is a histopathological study of material from a patient who presented himself with a group of papilliferous growths in the axilla, present since early life and recurring after removal. In the gross the tumors were firm, small nodules, most of them presenting a pore on the surface from which a sero-sanguinous fluid could be expressed. On scraping them away the subcutaneous tissue was found to be riddled with small cysts containing a clear fluid. The histopathological examination showed the growth to be an adenoma of the straight portions of the sweat gland ducts—hence a syringoadenoma. The writer regards the condition as a nævus originating in the embryonal epithelial "Anlagen" of the sweat glands, and proposes the name "Nævus syringoadenomatous papilliferus" as a designation descriptive both of its embryology and its histology.

ON THE INFLUENCE OF TEMPERATURE ON COMPLEMENT FIXATION IN SYPHILIS. K. ALTMANN, p. 871.

Altmann's conclusions from a comparison of results obtained with complement fixation in the incubator and in the icebox (Jacobsthal method), are summarized as follows:

(1) In 1,368 cases at different periods of the disease, 3 per cent. more positives were obtained by the cold than by the warm method.

(2) The results differed markedly at different periods. In the primary stage the warm method gave 27.5 per cent. more positives than the cold. In the early secondary stage the warm gave 2.5 per cent. more positives. But in late syphilis the cold method gave 17.5 per cent. more positives than the warm.

(3) Both methods should be employed to secure the best results.

(4) The investigation to discover what element in the reaction was responsible for the variations, led to the conclusion that the complement was not responsible, but rather some other element in the serum, which varied with the individual man or guinea-pig, with the temperature at which the reaction was carried on, and with the stage of the disease. For example the writer feels that the serum of older pigs reacts better to the cold method, that of young pigs to the warm.

DERMATOLOGISCHE ZEITSCHRIFT.

(July, 1913, xx, No. 7.)

Abstracted by PHILIP FRANK SHAFFNER, M.D.

BLADDER SYPHILIS. DREYER, p. 591. (*Conclusion.*)

Reviewing twenty-five cases of bladder syphilis, Dreyer writes that the disease of the bladder, occurring during the so-called second and third stages of the disease, possesses few clinical earmarks for diagnosis. They are usually mistaken for chronic cystitis, tuberculous cystitis, etc., or bladder tumors.

Cystoscopically, papules and ulcerations are found in the early stages—gummatous ulcerations and exceptionally interstitial changes producing a sort of in-laid floor, "mosaic" appearance of the bladder mucosa.

When bleeding from the bladder, of unknown ætiology, in the absence of tumors or interstitial changes, or a cystitis with few bacteria, not responding to the usual treatment for the same, exists, syphilis should be considered and a Wassermann made.

The prognosis is favorable except in the interstitial forms, when a resolution cannot be obtained.

The treatment is that of the usual antispecific therapy.

SEVEN CASES OF CEREBRAL DISEASE FOLLOWING SALVARSAN. CÆSAR, p. 569.

Cerebral difficulties following the administration of salvarsan are to be attributed to the fact that the drug exerts a toxic action on the cerebral capillaries, producing a paralysis of their contractile elements. These were the findings in the sections examined by Cæsar.

Individuals suffering from alcoholism, arteriosclerosis, infectious diseases, whose brain capillaries have been previously damaged by these conditions, are especially predisposed to these post-salvarsan changes.

Cæsar urges the ascertaining of a careful history before using the drug.

DEUTSCHE MEDIZINISCHE WOCHENSCHRIFT.

(Feb. 5, 1914, xl, No. 6.)

Abstracted by CLARENCE ALLEN BAER, M.D.

A SOURCE OF ERROR IN THE WASSERMANN REACTION DUE TO COTTON. HANS LANGER, p. 274.

Cotton contains substances that can make a negative Wassermann reaction into a positive if these substances get into the serum—this was proved experimentally.

(*Ibidem*, Feb. 12, 1914, xl, No. 7.)

UNUSUALLY LONG PERIOD OF LATENT SYPHILIS AND ITS PROGNOSIS. KARL STERN, p. 327.

The author cites many authors and cases to show that syphilis might never show any outward manifestations—that 30 to 40 per cent. never show any external manifestations. *Spirochætæ pallidæ* can hide themselves for a shorter or longer time in various organs without any clinical evidences. It would be incorrect to say that in the absence of secondary manifestations, the infection was eradicated with the primary sore. (*To be continued.*)

(*Ibidem*, Feb. 19, 1914, xl, No. 8.)

UNUSUALLY LONG PERIOD OF LATENT SYPHILIS AND ITS PROGNOSIS. KARL STERN, p. 392. (*Continued from No. 7.*)

Many cases of syphilis, while showing no secondary symptoms, still never show any later occurrences either. About 50 per cent. of syphilitics remain free from later manifestations. Because 50 per cent. of syphilitics show no secondary or later symptoms does not mean that they are free from syphilis, but that they will show either positive Wassermann or late tertiary manifestations. Of 100 women with typical tertiary lesions, 52 per cent. gave no history of any previous syphilitic troubles. Fully 34 per cent. of all tertiary cases of syphilis give no history of infection. (*Conclusion follows.*)

(Feb. 26, 1914, xl, No. 9.)

UNUSUALLY LONG PERIOD OF LATENT SYPHILIS AND ITS PROGNOSIS. KARL STERN, p. 438. (*Concluded from No. 7.*)

Many cases of tabes and paresis are known to exist without any earlier evidences of syphilis. By active treatment with mercury preparations (especially calomel) recurrences can be lowered from 9 to 15 per cent. The majority of cases of latent syphilis finally show themselves by internal and not external manifestations.

PECULIAR SPECIFIC REACTION OF LUETIC OR CARCINOMATOUS SERA TOWARD CERTAIN CHEMICALS. ENMERICH WIENER AND ARPAD VON TORDAY, p. 429.

Inactivated human blood serum will form a precipitate when brought into contact with a mixture of gold-potassium-cyanaldehyde, that will remain unchanged in a healthy serum upon the addition of acetic acid, but will clear entirely when acetic acid is added to such a mixture, if serum from a luetic or

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carcinoma patient be used. The authors believe they have a specific reaction and are experimenting further.

EXPERIENCES WITH EMBARIN HEYDEN. EDWARD KOBLIGK, p. 441.

Embarin is a mercury preparation containing 3 per cent. of mercury. The author explains his method of using this preparation.

(*Ibidem*, Apr. 2, 1914, xl, No. 14.)

EXAMINATIONS FOR SPIROCHÆTÆ IN THE BRAINS OF PARETICS.

E. FOSTER AND E. TOMASZCZEWSKI, p. 694.

Noguchi found spirochætæ in 48 out of 200 (24%) cases of paresis. Marinesco and Minea found 3 positive cases in 27. Levaditi, Marie and Bankowski found 11 cases in 41, Gerber and Benedek and Tatar, twice in 15 cases. The authors found 27 positive cases in 61 (44%). The spirochætæ found were, without exception, in every characteristic of the type of the *Spirochætæ pallidum*. The animal experiments conducted by the authors were all negative, although other experimenters have had positive results.

(*Ibidem*, Apr. 9, 1914, xl, No. 15.)

FAMILY SYPHILIS AND PARENCHYMATOUS KERATITIS. FRITZ LESSER AND PAUL CARSTEN, p. 755.

The conclusions reached after the study of a large material are as follows: Parenchymatous keratitis is always of a syphilitic nature. Tuberculosis does not even influence the occurrence of parenchymatous keratitis in children with hereditary syphilis. Antisyphilitic treatment is uncertain in its effect, and involvement of the second eye is practically never prevented. Mothers of syphilitic new-born children are always Wassermann positive, even if no clinical evidences be present. The immunity of these mothers that fulfill Colle's Law, is explainable by the latency of their syphilis. It is impossible to determine whether or not mothers of syphilitic children are infected directly by the father or by the spermatoc infection of the ovum. Twice as many syphilitic children are born as manifest syphilis clinically during the first year of life. This 50 per cent. latent hereditary syphilis is of importance in the wet nurse question.

The important question is not the intensity of syphilis in children, but the frequency of transference as regards the age of the maternal syphilis. Mothers with positive Wassermann reactions often bear syphilitic children six to twelve years after infection and, therefore, Wassermann positive women should be forbidden matrimony. The positive reaction in the father seems to be of less importance to posterity.

JAPANISCHE ZEITSCHRIFT FÜR DERMATOLOGIE UND UROLOGIE.

(January, 1914, xiv, No. 1.)

Abstracted by FRED WISE, M.D.

PRIMARY TUBERCULOSIS OF THE PENIS. SH. HOMMA, p. 1.

The author asserts that primary tuberculosis of the penis is not as rare as it may seem. Since Kraske's paper (1891), cases have been reported by Barbet,

Grouven, Wickham, Gastou, Schuchardt, Tschlenoff, Rose and others. In 1911, one case was reported by Mori, the other by Tagaki, in Japan.

Homma reports two additional cases, observed in Dohi's clinic. Histological and bacteriological examinations verified the clinical diagnoses in both instances. The first case occurred in a student of 21, in whom an ulcer presented on the dorsum of the coronary sulcus, appearing four months ago. The Wassermann reaction was negative and no improvement resulted from antiluetic treatment; the lesion became aggravated after salvarsan treatment.

The second case occurred in a man of 19, who presented a lichen scrofulosorum of the chest and extremities and tuberculous scars on the neck. There were a number of small ulcers on the right side of the glans and the coronary sulcus. The adjacent tissue was dark-red and infiltrated.

The first case healed completely under radium; the second case was lost before treatment was commenced.

NEOSALVARSAN TREATMENT OF SYPHILIS. G. INOUE, p. 33.

After administering 600 doses of neosalvarsan, the author arrives at the following conclusions:

1. In practice, on account of the solubility and neutral reaction of neosalvarsan, it is far more convenient to handle than salvarsan.

2. He employs a 6 per cent. salt solution in making up the mixture. With this, no visible change takes place in the solution, *i.e.*, there is no turbidity, and the reactions seem to be less marked than when the 4 per cent. solution is used.

3. Neosalvarsan in 5 per cent. solution (0.6 to 0.75 neosalvarsan in about 10 cc. of 6 per cent. salt solution) may be used intravenously with little discomfort and the injection may be performed with great facility.

4. The after effects following the use of neosalvarsan are no less severe than those of salvarsan. Headaches, nausea and exantheims were often seen.

5. Individual injections of neosalvarsan have not the same powerful effect on clinical lesions as individual injections of salvarsan; but the sum total of neosalvarsan injections produces the same final results as salvarsan.

6. In early syphilis, the Wassermann reaction rapidly becomes negative after three or four injections of 0.6 to 0.75 gm. of neosalvarsan, combined with mercury.

CONTRIBUTION TO THE HISTOLOGY OF CONGENITAL MUCOUS MEMBRANE CYSTS OF THE SCROTAL RAPHE. SH. MATSUMOTO, p. 58.

A patient presented a pear-shaped cyst near the frænulum of the penis and across the raphé. It was soft, elastic, fluctuating, movable on the subcutaneous fatty tissue and almost transparent. After enucleation, a histological study showed that the walls were lined with lamellated cylindrical epithelium; the contents consisted of a homogenous mucous mass.

(*Ibidem*, February, 1914, xiv, No. 2.)

CONCERNING IODINE ANAPHYLAXIS. T. ITO, p. 85.

A CASE OF PAGET'S DISEASE. R. ANDO, p. 113.

The disease occurred in a woman of 53, in whom the first symptoms were intense itching of the right breast. Soon after, an ulcer appeared on the affected area. The Wassermann reaction was negative. The diagnosis was verified by a careful histological study of the extirpated disease area.

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(*Ibidem*, March, 1914, xiv, No. 3.)

THE ORIGIN OF PIGMENT IN CERTAIN SKIN DISEASES. T. KURITA, p. 177.

The distribution of pigment in the various layers of the epidermis and the cutis is studied in various diseases by the author. These included a case of lichen planus and one of lichen acuminatus, arsenical pigmentation, pigmented naevi and Addison's disease. The author submits histological studies and a review of the literature on the subject.

VACCINE THERAPY AND ANAPHYLAXIS. T. ITO, p. 194.

CONCERNING HAIR DYES. M. OTA, p. 215.

For a number of years, hair dyes containing para-phenyldiamin have been prohibited in Japan. Still, the number of cases of dermatitis due to the use of hair dyes has greatly increased recently. The irritant action is caused by the formation of chinondiimin from the para-phenyldiamin. The author experimented with hair dyes in which he eliminated the poisonous constituent. A product called "Primal Black" was used; it contained no chinondiimin. Experiments were performed to ascertain the effects of the dye on the hair, how it is stained, whether it injures it; the effect on the skin; the effect on the kidneys. Tests were made on rabbits, guinea-pigs and the skin of human beings; no disagreeable results appeared to follow, either on the hair, the skin or in the kidneys.

THREE INTERESTING CASES OF POROKERATOSIS, AND ITS TREATMENT. G. MAKI, p. 223.

The localization of three cases of this disease reminded the author of systematized naevi. The first two cases occurred in brothers and affected the face, neck, back and legs symmetrically, in both patients. The third case was in a young girl, in whom the side of the head was affected. The treatment included X-rays, radium, mesothorium, the quartz lamp and carbon dioxide snow, of which the last proved to be the best. Histological studies are submitted.

ANNALES DES MALADIES VÉNÉRIENNES.

(January, 1914, ix, No. 1.)

Abstracted by PAUL E. BECHET, M.D.

THE CUTANEOUS REACTION IN SYPHILIS. BURNIER, p. 1.

Burnier discusses the various attempts to obtain an accurate cutaneous reaction in syphilis, similar to the von Pirquet, in tuberculosis. He explains the luetin test of Noguchi, and gives a large number of tabulated results, by different observers, mainly American. He adds a table of his own. In concluding, he states that in his experience, the reaction is negative in primary and secondary cases. It is frequently positive in active tertiary syphilis, less frequently so in hereditary, latent treated syphilis and parasymphilis. The reaction may be positive in non-syphilitics, and has occasionally been found so in cases of gonorrhœa, chancroid, lupus erythematosus, lupus vulgaris, pityriasis rosea and eczema. The skin of a certain number of tertiary syphilitics reacts positively to the injection of other bacterial emulsions, such as the gonococcus, colon bacillus and staphylococcus, or with tuberculin. It seems difficult to admit the absolute specificity of the luetin test in the diagnosis of syphilis.

EXTRAGENITAL CHANCRES IN WOMEN. BOBBIE, p. 31.

Bobbie discusses extragenital chancres in women. Of 1,187 cases of syphilis, in which the situation of the chancre was definitely known, 326 were extragenital; of these 326 chancres, the large majority were on the buccal region; namely, 57 on the upper lip, 45 on the lower lip, 10 on the tongue, 97 on the tonsils, 5 on the gums and 1 on the mucous membrane of the mouth.

LO SPERIMENTALE.

(1913, lxvii, No. 6.)

Abstracted by G. A. CARLUCCI, M.D.

CONCERNING A CASE OF LYMPHANGIOMA CAVERNOSUM OF THE SCROTUM. CARLO RIGHETTI, p. 825.

The author gives the clinical history of the case, stating that since childhood the patient has had a swelling in the left side of the scrotum just below the testicle. It has gradually increased in size and has only become slightly adherent to the skin. At operation, the swelling was the size of an orange, easily separated from the testicle and the small portion of skin adherent to it was removed also.

The tumor on section showed it to be composed mainly of cysts of varying size, filled with a very fine substance which seemed to be coagulated lymph.

A very complete histological description is given, from which the author draws the conclusion that the tumor belongs to the class of cystic lymphangiomas. He also draws attention to the rarity of the site for this kind of tumor.

CLINICA DERMASIFILOPATICA DELLA R. UNIVERSITA
DI ROMA.

(February, 1914, xxxii, No. 1.)

Abstracted by G. A. CARLUCCI, M.D.

LYMPHADENITIS GUMMOSA. CAMPANA, p. 3.

A report of eight cases with four drawings and a description of the pathological changes occurring in a node removed at autopsy from one of the cases. The nodes most commonly involved were those of the neck, usually accompanied by ulceration of the skin overlying them.

In the gland examined, the most prominent feature was the marked increase of white cells and thickening of the blood vessel walls, especially the intima and adventitia, mostly due to infiltration of leucocytes. Areas of caseation were present in the gland, around which the outline of a follicular element could still be made out.

Campana is of the opinion that this is a defensive process of the gland to localize the infection.

EFFECTS ON HAIRS AND THE BEHAVIOR OF ROENTGEN RAYS
PASSING THROUGH STRATA OF ACID OR ALKALINE RE-
ACTION. GALIMBERTI, p. 24.

A report of some experiments on animals and on photographic plates.

ARTERIOSCLEROSIS. CAMPANA, p. 26.

The author describes and discusses this condition, which he has studied in several cases of acquired syphilis and also in several hereditary syphilitics, the parents of whom had been under the author's care during their time of infection. Campana is of the opinion that many of these arteriosclerotic changes are directly due to the preceding syphilitic infection.

RUSSKI JOORNAL KOJNIKH E VENERICHESKIKH
BOLEZNEI.

(January, 1914, xxvii, No. 1.)

Abstracted by M. L. RAVITCH, M.D.

THE RÔLE OF PROWAZEK'S SPIROCHÆTÆ IN PSORIASIS VUL-
GARIS. RUDNITZKI, p. 3.

In 1912, Prowazek in the *Centralblatt für Bacteriologie* described spirochætæ found in psoriasis. He was able to cultivate the spirochætæ by the following method: Removing the scales of a psoriatic lesion with benzine and alcohol, he made cultures on a covered glass and tinted them by Giemsa's and Löffler's method. By this method he found in one of the two cases of psoriasis, pale, rose-color spirochætæ. Prowazek thinks these spirochætæ to be the causative agent of psoriasis.

Rudnitzki followed the method of Prowazek to the minutest details in 22 cases and could not find any spirochætæ described by Prowazek.

A CASE OF PSORIASIS RUPIOIDES ARTHROPATHICA. POSPELOV, p. 5.

Pospelov claims that the existence of arthropathia in psoriasis has been noticed by a number of dermatologists. He refers to Alibert (1822-1833), Rayer (1835), Cazenave (1838-1849). In the text-book of Dévérgie of 1857, there is found reference to this combined affection. Dévérgie showed that in some cases of psoriasis the fingers and the toes became almost immovable. These changes are similar to podagra and arthritis deformans. Gilbert in 1860, Bazin in 1868 and Satterlee in America in 1873 observed that psoriatics often suffer from rheumatoid affections or came from parents with rheumatic diathesis. In Russia, Polotelnov in "Dermatological Investigations" calls attention to different changes that have taken place in a case of his and which we often meet in arthritis podagra. These changes are accompanied by an attack of psoriasis. Pospelov cites cases of psoriasis arthropathica reported by Duckrath, Allen, Unna, Shoemaker and Bourdillon. In the 36 cases reported by Bourdillon, all of them were associated more or less with arthritis, rheumatic and podagric symptoms. Pospelov cites many other authorities that associate psoriasis with rheumatoid conditions. Rudnitzki is of the opinion that the cause of psoriasis and arthropathia is due to chronic irritation of the spinal ganglia, while Baquero y Thesarios holds the disease to be due to invasion of bacteria, whose toxins act upon the nerves

and cause arthropathia. A number of cases of psoriasis arthropathica are reported by some dermatologists to be due to gonorrhœal rheumatism. While Poucet advanced the idea that tuberculosis was the cause of psoriasis arthropathica, it was later proven to be erroneous. Prowazek claimed that certain spirochætæ were the cause of this affection, but he could not prove it on account of lack of clinical material. Leopold-Levi denies that there is such a disease as psoriasis arthropathica; both diseases are separate; and according to his view, it is a mere coincidence, but both may be due to faulty internal secretion. Leredde claims that either disease is due to infection. In the past century, Pospelov claims, many dermatoses were taken for psoriasis and the idea that psoriasis was transmitted from animals to human beings was lately rejected. In the year 1878, 1879 and 1880 Lang claimed that he had found the cause of psoriasis to be a fungus and called it "epidermidophyton." In 1883, Eklund discovered a similar fungus and he called it "lepocolla repens." It was proven later that he was mistaken. In 1885, Lassar attempted to inoculate rabbits with psoriasis; he was partly successful, but it undoubtedly must have been a case of ringworm. Syphilis has been considered by Taylor to be the cause of psoriasis arthropathica, while Poor was of the opinion that malaria was the cause.

Quoting many opinions in regard to the ætiology of psoriasis arthropathica, the author came to the conclusion that the real cause of this affection is obscure, though he is inclined toward the microbic theory. He is inclined to his latest view since he found an analogy of this disease to gonorrhœal rheumatic infection and arthritis. Pospelov cites a very interesting and extensive case with successful cure. Natrium salicylate internally, and the usual external keratolytic remedies were used.

A CASE OF LUPUS VULGARIS CAPILITIS CURED BY FINSEN-REYN'S LAMP. MAK SHEIV, p. 20.

Maksheiv had a patient with a typical case of lupus vulgaris of the scalp that resisted the ordinary treatment. The size of the ulcer was $8\frac{1}{2}$ cm. by 3 cm., the depth a half cm. At the beginning it was thought to be an *ulcus rodens*, but the history, appearance and microscopical findings showed it to be lupus vulgaris. The patient was given treatment with Finzen-Reyn's lamp, three weekly sésances, duration thirty minutes each. Later the treatment was diminished in duration and frequency. Between treatments, xeroform was used as an external application. After thirty sésances the patient was completely recovered.

THERAPY OF LEG ULCERS. FLOROVSKI, p. 29.

Troitzki, reviewing Florovski's article in the *Therapeutic Review*, states that Podvisotzki and Pirone, in 1906, showed that under the influence of cold air lower than 55° to 60° C., there appeared in the stratum granulosum and stratum malpighii giant cells which played a great part in hypertrophy and regeneration of the epithelium. The writer tried the application of this method in 30 cases of leg ulcers that were characterized by the lack of regeneration and epithelisation. Cold air was administered by ethyl chloride, after the sores were bathed in hot water followed by application of solution of kali permang. or liquor Burrowi. After that the sores were washed off with physiological normal salt solution, a thin stream of ethyl chloride was applied to the edges of the sore, taking precaution not to freeze and not to harden them. A bland ointment was applied afterward. This was done daily or every other day. In 50 per cent. of cases epidermisation took place on the fourth day, often after one sésance, rarely after two, three or four. Little white islands formed on the sore and they soon began to coalesce. The treatment was absolutely painless. He recommends a new name for this method of treatment and suggests "crimotherapia localis."

BRITISH JOURNAL OF DERMATOLOGY.

(January, 1913, xxv, No. 1.)

Abstracted by FRANK CROZIER KNOWLES, M.D.

THE COMPLETE LIFE-HISTORY OF THE ORGANISM OF SYPHILIS.

J. E. R. McDONAGH, p. 1.

McDonagh has made a careful study of the extremely complicated development and fertilisation of the syphilitic organism. The sporozoite is seen in two forms, circular and kidney-shape, of about $1\frac{1}{2}$ microns in diameter, actively motile and occasionally with distinct flagellæ. These are found not only in scrapings from syphilitic lesions, but also in blood withdrawn from healthy skin, and in the general blood-stream during the stage of general infection. The sporozoite may be found in the former when the spirochætæ pallidæ are undeterminable. It may be found within or outside of a cell, although a connective tissue cell is usually its host. The sporozoite steadily increases in size and gives rise to several bodies, which are differentiated into those of a male and female type. The cell-host finally breaks, after the nucleus has become degenerated and disappears, and the male and female neurozoites are freed. The bodies which have not been sexually differentiated seek, with the breaking of the cell-wall, other connective-tissue cells where the developmental cycle continues.

The sporozoite again increases in size, but not to so marked a degree as in the first instance. It then divides into two and again into four. These four masses by subdividing form a ring at the periphery of the body, the host-cell becomes almost completely degenerated and destroyed. This is probably the true asexual stage.

Eventually coils are formed by the uniting of these bodies and the spirochætæ are formed. In early active syphilitic lesions the sporozoites are found most easily and a coil and spore cyst are found in almost every specimen. The female gametocytes and zygotes are found in abundance in most specimens and every lymphatic gland, and are not affected by salvarsan or mercury. Dark staining motile dots, circular bodies of varying size, and endothelial cells all have to be distinguished from the various phases of the life-cycle of the syphilitic organism. The writer assigns the cause of syphilis to the order Sporozoa, sub-class Telosporidia; still further classifying it of the order Coccidiidea, of the species *Leucocytozoon*, and therefore names the syphilitic parasite "*Leucocytozoon Syphilis*."

FURTHER RESEARCHES ON TRICHOMICOSIS FLAVA RUBRA ET NIGRA OF THE AXILLARY REGIONS. ALDO CASTELLANI, p. 14.

The writer has previously written upon a nodular affection of the hair of the axillary region. The yellow variety of this is due to a very thin bacillary-like fungus, which he has named *Discomyces tenuis*. The black and red varieties are due to a combination of this fungus with chromogenic cocci; a coccus producing black pigment (*Micr. nigrescens*) or red pigment. *Discomyces tenuis* vary in length from 4 to 10 microns, 1 to $1\frac{1}{2}$ microns in width, and they may be straight, bent or branching. They are rather closely packed together, and are imbedded in an amorphous cement-like substance. The writer has not succeeded in cultivating the organism.

The coccus-like organism found in the black variety are Gram-positive, rather large, non-motile, and resemble somewhat a *cocco-bacillus*. The various morphological tests for this organism have been carefully carried out.

The coccus-like fungus found in the red variety of the affection is more

difficult to isolate and grow than in the latter type. It is Gram-positive and non-motile. The coccus is closely allied culturally to that found in chromidrosis.

The nodules found on the axillary hairs are visible to the unaided eye. They are of rather soft consistency, easily removed by scraping, of a yellow, black, and less frequently red, color, and are of two types. They may be abundant or few in number.

The affection runs a chronic course but may disappear spontaneously upon moving to a warmer climate. A solution of formalin in spirit, one fluid dram to six fluid ounces, and at night a sulphur ointment, two to five per cent. in strength, are recommended for the eradication of the condition.

NOTE ON COPRA ITCH. ALDO CASTELLANI, p. 19.

Copra is derived from cocoanuts and frequently workers in copra mills are attacked by pruritic outbreaks. The eruption resembles scabies excepting for the absence of the burrows. The eruption generally begins on the hands, and from there spreads to the arms, the legs and the trunk; the face is never attacked. There is no tendency for healing to occur while the patient continues to work in infected mills and handles copra.

The outbreak consists of pruriginous papules, which are excoriated by scratching and covered by small blood crusts. Papulo-pustules and pustules are also present. The affection is caused by a small animal parasite found in the copra dust. This parasite crawls over the surface of the body, rather than burrowing into the skin. Dr. Stanley Hirst described it as a new variety of *Tyroglyphus longior*.

Castellani was able to produce itching in from twenty-four to forty-eight hours, by rubbing the copra dust containing these minute animals into the skin. The same result was obtained by placing the animals on the skin under a covering, such as a piece of lint kept in place by a bandage. A few individuals seem to be immune to the action of these parasites. The eruption disappears spontaneously upon stopping work. The writer found betanaphthol ointment (5 to 10 per cent.) of benefit, applied nightly, in the eradication of the condition.

NOTE ON THE ÆTIOLOGY OF SOME TROPICAL DERMATOMYCOSES (TINEA CRURIS, TINEA FLAVA ET NIGRA, TINEA IMBRI-CATA). ALDO CASTELLANI, p. 23.

Castellani goes thoroughly into the study of the different fungi and their cultural characteristics. He mentions those which have been observed most frequently in Ceylon, dealing with those which have been cited in the above title.

(*Ibidem*, February, 1913, xxv, No. 2.)

ON A SMALL EPIDEMIC OF THE AREATE ALOPECIA. T. COLCOTT FOX, p. 51.

The writer records twenty-one cases in girls, in one school, in which bald patches developed. The ages ranged from nine to fourteen years. The patches varied from a finger-nail to a shilling in size; most of the areas were nearly denuded of hair, but retained some typical "note-of-exclamation" atrophied stumps, firmly fixed, and in some, these were observed at the border of the patch. The areas were not markedly scaly or burnished. Some of the follicles from which the hair had fallen were plugged with dark pigmented débris. The borders were not sharply circumscribed but minute radiations ran into the surrounding hairy part. In most cases there was but the one patch. Repeated microscopical examinations of the stumps and plugs proved negative for fungus. The areas were rapidly cured by the red oxide of mercury ointment combined with

cantharides. The writer refers to epidemics of a like character reported by Hillier and by Bowen.

A CASE OF NORWEGIAN OR CRUSTED SCABIES. WALLACE BEATTY, p. 56.

The outbreak was observed in a male, aged thirty-nine, born in Ireland, and developed twenty-eight years previously. The eruption was limited to the hands and fingers until about ten months ago, when the lesions became somewhat generalized. There has been intense itching which has interfered with sleep.

The scalp is abundantly covered with dry, grayish scales, forming a coating resembling psoriasis. There is scaliness of the forehead, universal redness of the trunk, especially of the back, with abundant dry scales and in places moisture, suggesting an eczematous outbreak. The extremities show an outbreak of a similar character. The hands and the fingers exhibit projecting masses of dry, grayish scales over and surrounding the nails, also on the dorsum and the borders of the hands and the wrists. The toe nails and the surrounding areas show a similar condition but to a lesser degree.

Numerous acari were found in the scales on the hands, the fingers and other portions of the body, although no burrows were found. The case was successfully treated with sulphur soaping, sulphur baths, and sulphur and balsam of Peru ointment. The cases of DeAmicis and Boeck were mentioned.

A CASE OF SPOROTRICHOSIS SIMULATING BLASTOMYCOSIS. H. G. ADAMSON, p. 60.

The patient was a male of sixty years, who developed, six months ago, an ulcer on the right leg, which was followed by others upon the trunk and the hands; those on the former areas healed without treatment, while those on the hands increased in size. The back of the right hand was almost covered by an irregular, raised, circular patch, the greater part of which consisted of raised, closely packed vascular papillæ, from between which sero-pus could be squeezed. Scar-like bands and streaks were observed in other portions of the lesions, where healing had occurred. The margin of the patch was elevated, dusky-red and gradually sloped to the sound skin; pinhead-sized abscesses were observed in this margin. In all respects the lesion was clinically characteristic of blastomycosis. Cultures, however, showed the presence of sporotrichium. There was no lymphangitis. The ulcer healed under the administration of one-half dram of potassium iodide, given in divided doses daily.

(*Ibidem*, March, 1913, xxv, No. 3.)

CHRONIC RAYNAUD'S SYMPTOMS, PROBABLY ON A SYPHILITIC BASIS, ASSOCIATED WITH LIVEDO RETICULATA. REMARKS ON LIVEDO RETICULATA (LIVEDO ANNULARIS, LIVEDO FIGURATA, OR CUTIS MARMORATA). F. PARKES WEBER, p. 81.

A married woman, aged fifty-four, has had symptoms of Raynaud's disease, during cold weather, on the left hand and the left foot, for fourteen years. On several occasions during the last eight years, gangrænous areas have developed on the toes of the left foot. The condition, which is more marked on the feet than the hands, is made much worse both by cold and artificial heat. The patient has mitral obstruction, is subject to attacks of rheumatism, has a high blood pressure, arterial sclerosis, chronic interstitial nephritis, slight albuminuria, hæmorrhages in the vitreous of the left eye, and a low percentage of hæmoglobin. The hands are very red and tend to become cyanosed, and the feet are almost

bluish in hue. There is a blotchy mottling of the skin, livedo reticulata, over the extensor surfaces of the upper extremities, on the front of the thighs, and on the anterior and posterior surfaces of the trunk. The mottling disappears temporarily by rubbing the skin in a warm room. The writer considers the Raynaud's symptoms and the livedo were originally of syphilitic origin, notwithstanding the present negative Wassermann test. Allied cases described by various authors are given in more or less detail.

(*Ibidem*, April, 1913, xxv, No. 4.)

THE CLASSIFICATION OF THE CHRONIC RESISTANT MACULAR AND MACULO-PAPULAR SCALY ERYTHRODERMIAS. RICHARD L. SUTTON, p. 115.

Sutton makes a study of this complicated classification and draws the conclusion that these cutaneous disorders which resemble more or less seborrhœic dermatitis, psoriasis and lichen planus should be classed under the general heading of chronic resistant macular and maculo-papular scaly erythrodermias. It is best, however, from a strictly scientific point of view, to divide these conditions into various groups, depending upon their clinical and histo-pathological resemblances. At one end of the list should be placed Crocker's xantho-erythrodermia perstans, and at the other, the parakeratosis variegata of Unna, Santi and Politzler, with Brocq's parapsoriasis group, and psoriasis lichenoides, in which is included Neisser's lichenoid eruption, Jadassohn's psoriasiform and lichenoid exanthem and nodular psoriasiform dermatitis, and Juliusberg's pityriasis lichenoides chronica. The writer gives two cases in detail, including the biopsy findings.

(*Ibidem*, May, 1913, xxv, No. 5.)

EPITHELIOMA AND RODENT ULCER OCCURRING IN THE SAME PATIENT. HALDIN DAVIS, p. 149.

The two malignant growths developed in a man aged fifty-six years; the rodent ulcer was observed on the sole of the right foot, while the epithelioma was found on the right thigh. There was no glandular enlargement. Microscopic examination proved the diagnosis. The writer comments on the few cases reported, showing the two types of lesions present. Haldin Davis refers to those recorded by Beatson, Fordyce and the compilation of McCormac.

MULTIPLE PIGMENTED WARTS IN PREGNANCY. E. WARD, p. 153.

The patient developed crops of pigmented flat warts on the body, the neck and the limbs, during the latter part of pregnancy. After parturition a few of these dropped off, but the majority remained. The same anomaly was observed during a second pregnancy. The neck showed the greatest involvement. The face and the hands were unattacked. These warts were still present three years after the confinement.

A CASE OF MULTIPLE TELANGIECTASES. J. H. SEQUEIRA, p. 154.

A woman, aged 55, stout, anæmic, with high blood pressure and thickening of the retinal vessels, had exhibited for five years minute red spots on the fingers and the face. Occasionally these spots broke down and caused a considerable hæmorrhage. She has had varicose veins for ten years. On examination, many telangiectases were found on the cheeks, without any particular grouping, and also punctate red spots on other portions of the face. Numerous punctate spots of a like character were noticed on the dorsal surface of the fingers and the

thumbs and also on the palmar aspect. The largest lesions were pinhead in size. The lesions were also found on the tongue, the mucous membranes of the lower lip, the hard palate, the uvula, and the labium majus. The subcutaneous veins of the chest and the abdominal wall were well marked, and just above the level of the scapular spines there was a fan-shaped arrangement of dilated superficial vessels. The subcutaneous vessels around the ankles and on the dorsum of the feet were also dilated.

The patient had a nose bleed nearly every morning and bleeding, at times, occurred from the tongue.

Multiple telangiectases, according to the writer, are divided by Colcott Fox into *navi*, including the stellate *navi* and probably Hutchinson's infective angioma; telangiectases associated with various dermatoses; telangiectases symptomatic of disturbances of circulation; and essential or primary telangiectases.

(*Ibidem*, June, 1913, xxv, No. 6.)

THREE CASES OF GRANULOMA ANNULARE. J. L. BUNCH, p. 183.

The writer reports three cases of this affection; in one the dorsa of the feet were attacked, while the other two showed the usual distribution on the back of the hands. There were no subjective symptoms and the family histories were negative.

Microscopic examinations showed a thickening of the horny layer and a lengthening of the interpapillary bodies, and imperfect staining of the nuclei. The derma presented perivascular infiltration of small round cells, mononuclear lymphocytes and leucocytes, a few mast-cells and erythrocytes; dilatation of the blood vessels, in the neighborhood of these infiltrations and also in the papillary portion. These centres of inflammation showed an early stage of necrosis, with deficient staining of the cell nuclei. The elastic fibres were normal, and no bacteria were found. The microscopic examination of the second case exhibited a chronic inflammatory process involving the epidermis and the derma; the infiltration was around the blood vessels.

The writer discusses its resemblance to erythema elevatum et diutinum, erythématosclérose pemphigoïde, lichen annularis, tumores benigni sarcoidei of Rasch and Gregerson, and Boeck's sarcoids of Galewsky. Bunch considers that the cases, usually known by the name of granuloma annulare, form a group clinically and histologically distinct.

(*Ibidem*, July, 1913, xxv, No. 7.)

CASE OF ERYTHEMA INDURATUM GIVING NO EVIDENCE OF TUBERCULOSIS. JAMES GALLOWAY, p. 217.

The outbreak appeared on the lower extremities of a woman aged thirty-six years, who was in depressed health and distinctly anæmic. Attacks suggesting rheumatism had been present at various times. The maximum number of lesions present at any one time was twelve, and they were indurated, with a surrounding purplish ring, painful and tender on pressure. Ulceration of a superficial type developed, resulting only from abrasions, which did not spread but tended to heal with resulting insignificant scars. The outbreak rapidly disappeared upon rest in bed. As the patient improved in health the tendency to a fresh crop of lesions has correspondingly decreased. There were no signs of tuberculosis present. Tuberculin injections were negative although the von Pirquet test gave a slight reaction. Injection of a portion of diseased tissue into a guinea-pig was without result.

Histologically, the diseased tissue was found to consist mainly of mononuclear

cells, resembling plasma cells, infiltrating and causing absorption of the fat in the subcutaneous tissue, and also infiltrating slightly the lower portion of the corium. Numerous large, well-formed giant-cells, resembling protoplasmic cysts, and containing large numbers of peripherally arranged nuclei, were loosely attached to the surrounding granulomatous mass. No tubercle bacilli were found.

The writer believes from his findings in the present case that erythema induratum should be grouped into two classes; the one, definitely tuberculous, of a characteristic tuberculous histological picture, presenting or developing other signs of that disease, and causing tuberculosis by inoculation of the diseased tissue into susceptible animals; and the second, closely analogous to persistent forms of erythema induratum.

A CASE OF DERMATITIS GANGRÆNOSA INFANTUM. A. H. H. HOWARD, p. 227.

The writer describes a case of this affection, in an infant of ten months, which terminated fatally in four days. The lesions consisted of vesicles, bullæ, pustules, necroses and ulcerated areas.

EDINBURGH MEDICAL JOURNAL.

(February, 1914, xii, No. 2.)

Abstracted by CHARLES T. SHARPE, M.D.

ON THE NEOSALVARSAN TREATMENT OF SYPHILIS DOUGLAS J. GUTHRIE, p. 137.

Neosalvarsan readily undergoes oxidation, with the formation of highly toxic products, and for this reason the solution should never be heated, and should be injected as soon as prepared. The dosage varies between 0.15 gm. to 0.9 gm. The dose should under no circumstances exceed the latter, and at least a week should be allowed to elapse between injections.

Fatalities and their cause: The untoward results are traceable either to (1) the action of the drug itself, or (2) faulty technique in its administration, and the latter is probably the more frequent cause of disaster. To obviate these dangers Ravaut studied the question and found that, if neosalvarsan was dissolved in 10 to 15 cc. of distilled water, the exact amount varying according to the dose employed, a solution was obtained which produced no hæmolysis when mixed with the blood. In practice, one finds that 10 cc. of water will, with an ordinary dose of the drug, give a solution which is practically isotonic with the blood.

The apparatus required consists of a beaker, a 20 cc. glass Luer syringe with needle and a special tube-filter which is a piece of glass tubing three or four inches long, containing in its interior a small plug of gauze. One end of the tube is adapted to fit the nozzle of the syringe in place of the needle, the other end is free. By means of this simple device the entrance into the syringe of any solid particles is prevented.

After the syringe has been filled, the filter is removed and replaced by the needle, and the solution is then injected into one of the veins of the patient's arm. It is often easier to enter the vessel from one side rather than anteriorly. As soon as the needle enters the vein, blood will be observed flowing toward the syringe, and at this moment the piston should be slowly pressed. There should be no pain, and no swelling should appear in the neighborhood of the needle if the technique is correct. The patient should rest in bed for 24 hours.

Advantages: (1) The whole process occupies only 2 or 3 minutes, so that

the risk of oxidation of the drug is avoided. (2) By the use of only a small quantity of distilled water the possible occurrence of toxic symptoms due to impurities in the water is minimized. (3) No rubber tubing is required, and the whole apparatus may be easily sterilized by boiling.

To avoid the rise of temperature frequent after the primary infection, due to the liberation of toxins during the destruction of spirochætae by the drug, the treatment should be preceded by a short course of mercury. Headache is also a frequent sequel to a first dose of neosalvarsan. It commences several hours after the injection, runs a course parallel to that of the rise of temperature, and as a rule is slight. Nausea, which may be accompanied by vomiting, follows a first injection in about 10 per cent. of cases. It commences immediately after the injection, but as a rule passes off quickly, and seldom gives rise to any trouble. Diarrhœa is less frequent, is seldom severe and is usually traceable to some error of diet or to want of previous preparation of the patient.

At the clinic of Dr. Brocq, in Paris, it is usual to give a course of three injections of neosalvarsan in doses of 0.3 grain, 0.45 grain, and 0.6 gm. respectively, allowing a week to elapse between each two administrations. This is followed up by a course of mercurial treatment, consisting of intravenous injections of one of the soluble salts, usually the cyanides, which contain a high percentage of mercury. The usual dose of mercuric cyanide is $\frac{1}{2}$ grain, and this is given in a 1 per cent. aqueous solution daily, or every other day during the first half of each month for several months. After which a milder treatment, such as the oral administration of liquor hydrarg. perchlor. is adapted. Brocq finds that with these comparatively small doses of neosalvarsan he can obtain results quite as good as those which follow the large doses advocated by Ravaut.

TUBERCULIN: THE RATIONALE OF ITS USE; ITS POSSIBILITIES AND LIMITATIONS. EDMOND BÉRANECK, p. 101.

It would be rather ill advised to attempt to abstract this twelve-page article on tuberculin therapy, as the separation of a statement from the context might readily lead the reader into error. The following quotations cannot be misconstrued.

"In order to avoid the risk of going beyond the optimum dose, which is often very minute, at the beginning of the treatment, the following indications may be taken as a guide. They embody and will serve to accentuate those given by Professor Sahli in the work I have just cited, namely, *Le Traitement de la Tuberculose par la Tuberculine*.

1. Begin by injecting $\frac{1}{20}$ cc. of a very dilute solution of my tuberculin.
2. Repeat each dose of tuberculin at least five times in afebrile cases in good general condition, and ten times or more in febrile cases in order to judge accurately of the stimulating effect of the dose on the defensive mechanism of the body.
3. Thereafter increase the preceding dose of tuberculin by $\frac{1}{20}$ only.
4. When the optimum dose shows itself by favorable therapeutic action, however slight, keep to that dose as long as its favorable action persists.
5. In the course of treatment, "reactions" should be avoided. Reactions are, in fact, the evidence of an excess of tuberculin, and indicate that the optimum dose has been passed.

"Amelioration, where cure is impossible, cannot be demanded of tuberculin therapy in all forms of tuberculosis. Even rationally applied, tuberculin has only a limited curative power. In fact, only those cases are susceptible of amelioration or cure in which the means of defence, under the specific stimulant action of tuberculin, are still in a condition to master the bacillus, to destroy the toxins, and to cicatrize the tissue lesions which the bacillus has provoked." Unfortunately we have no means of foretelling whether a course of tuberculin

will be therapeutically successful even in a relative degree. We cannot know the result until trial has been made. The less effectively an organism defends itself against bacillary infection the less also will be the success with which the use of tuberculin is followed. This is why treatment with tuberculin is not justifiable in those acute forms of tuberculosis which at the onset cause a profound lowering of the general condition and a rapid invasion of the organs. Nor should it be used for those tuberculous patients who after a more or less prolonged resistance have exhausted their defensive resources and are almost at the point of death."

The chances of success in tuberculin therapy are increased by intervening as soon as tuberculosis is diagnosed, or even suspected. It should not be regarded as a reserve procedure, only to be resorted to when other methods have failed.

BOSTON MEDICAL AND SURGICAL JOURNAL.

(Jan. 22, 1914, clxx, No. 4.)

Abstracted by CHARLES T. SHARPE, M.D.

MORTALITY OF HEREDITARY SYPHILIS. ABNER POST, p. 113.

At the Dermatological Clinic of the Boston Dispensary a study of the above subject was made in 30 families. In 168 pregnancies there were 53 miscarriages and still births and 44 early deaths. Of the 71 living children, 33 were patients of the dispensary and 38 were supposedly well. Many varieties of lesions were exhibited, notably partial or complete blindness. Many children were mentally deficient and consequently backward in school.

Post points out the unsatisfactory dispensary treatment of these cases, as they came complaining of some affection of the various parts of the body,—nose, throat, legs, eyes, lymphatic glands, bones, as well as internal organs—heart, lungs, nerves and other organs. For each one of these troubles the child has ordinarily sought relief in the clinic devoted to the special organ affected and this having been attended to, the child was discharged. Yet the child needed treatment for its constitutional condition.

He points out the importance of eliminating syphilis from the stigma attached to venereal diseases as probably at least half the victims have innocently acquired the disease. Syphilis and gonorrhœa are distinct diseases due to a different organism; they, therefore, should be studied as distinct diseases and not as evidence of immorality. "The physician must do his share in their prevention and control quite as much as the moralist. Syphilis is an infectious disease—conveyed by the most innocent kiss or even careless handling. No one can for an instant think of calling the children referred to in this paper sinners." "The disease to attach disgrace to all victims of the disease, leads to concealment and difficulty in study. If we are in any way to control the disease it is necessary to have a moderately accurate knowledge of it. The more we know of syphilis the more formidable do its possibilities appear. The many fatalities and the possible diseases which may affect the survivors, as well as the good that may be done by supervision and medical care, not only in the way of prevention but in the amelioration and possible cure of the afflicted, it is the object of this paper to point out."

"Until the disease is properly reported and entered as the cause of death, where such is the case, we will not have a proper conception of the vast importance of the disease nor the essential element in the effort to arouse public opinion to its vast importance as a question of political economy."

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(*Ibidem*, Jan. 29, clxx, No. 5.)

PROGRESS IN THE DIAGNOSIS AND TREATMENT OF SYPHILIS.

JOHN H. CUNNINGHAM, JR., p. 151.

Cunningham suggests withdrawing sufficient blood in cases of arteriosclerosis when injecting salvarsan, to avoid increasing the arterial pressure. He has treated a diabetic also affected with syphilis, with salvarsan, with good results. Another interesting case report was that of a doctor, who was blind and in whom sight was to a great extent restored by the administration of five doses of salvarsan. This is an interesting paper, well worth reading.

THE CASE FOR RADIUM THERAPY. SAMUEL DELANO, p. 156.

Delano reviews the whole subject of radium treatment and compares its action to the X-ray. It is an article that does not lend itself well to abstracting. The paper is completed in the same Journal of the date of February 5th.

(*Ibidem*, Feb. 26, 1914, clxx, No. 9.)

THE EFFECT OF "606" ON THE EYE, WITH THE REPORT OF SEVEN CASES OF SERIOUS EYE COMPLICATIONS FOLLOWING ITS USE. P. S. McADAMS, p. 308.

In this article the effect of the various arsenical preparations upon the eye is reviewed and the serious results of atoxyl especially mentioned. Two-thirds of one per cent. of cases receiving antisyphilitic treatment showed disturbance of vision. Of the seven cases, six showed serious lesions of the deeper structures of the eye, and in four of these practical blindness has resulted. In one case the relapse showed itself as an iritis, which readily improved after a second injection of arsenobenzol. In every one of the cases involving the deeper structures of the eye a period of at least five to six weeks elapsed before the onset of the symptoms. Surely all the arsenic had been eliminated from the system by that time. Of the four serious cases none responded to the ordinary anti-specific treatment.

"While I believe that in all of these cases the effects were due to the disease and not to the drug, it tends to prove that the character of the disease is changed, that its virulence is increased." This would support the contention of those who believe that insufficient doses have a provocative or irritating effect.

"Summing up the effects of '606' on the eye, I should say that no case of injury to the healthy eye has been proven. A favorable result from the application of this drug is to be expected in syphilitic diseases of the iris, the chorioid, and retina and the optic nerve; in paralysis of the ocular muscles, due to syphilis, and sometimes in interstitial keratitis. It is especially indicated when a speedy action is desired."

CANADIAN MEDICAL ASSOCIATION JOURNAL.

(November, 1913, iii, No. 11.)

Abstracted by CHARLES T. SHARPE, M.D.

SYPHILITIC INFECTIONS OF THE CENTRAL NERVOUS SYSTEM.

C. EUGENE RIGGS, p. 9.

This is a most excellent and complete review of the subject. Under treatment the author states that Robertson of the Royal Asylum, Edinburgh, uses

the salvarsanized serum in addition to, and in the intervals between, the salvarsan injections. The dose varies greatly, all the way from 3 to 30 cc. according to the technique employed in the preparation of the serum. The spirochaetocidal action of the serum of salvarsan-treated patients is markedly increased by heating at 56° C. for thirty minutes (Swift and Ellis); before making the injection from 5 to 15 cc. of spinal fluid is withdrawn "until the pressure falls to 30 mm. of spinal fluid."

SMALLPOX AND CHICKENPOX. H. W. HILL, p. 115.

This article is of unusual merit and furnishes a splendid summary of the essential features so necessary to guide one in a diagnosis of these conditions. Some prevalent misconceptions concerning the differential diagnosis are effectually dealt with. As the article comprises twelve pages it is almost impossible to do it justice in an abstract of reasonable length.

JOURNAL OF THE MISSOURI STATE MEDICAL ASSOCIATION.

(January, 1914, x, No. 7.)

Abstracted by CHARLES T. SHARPE, M.D.

BRAIN SYPHILIS; A CASE REPORT WITH POST MORTEM FINDINGS.

GEORGE HOWARD HOXIE, p. 245.

A very complete history of the case is given. Four months after the onset of the disease and six weeks after the acute symptoms (ptosis, chill, etc.) developed, the patient died.

Summary of the post mortem findings: "The initial process was a degenerative one; at the time when the salvarsan was given an acute leptomeningitis and ependymitis was started up, which, through pressure on the vital centres, brought about death. On microscopic examination a leptomeningitis (syphilitica) was found, most developed about the bulb and lower pons. The central canal was obliterated by a round-cell infiltration at the height of the olives. An arteritis was evident in this same area with infiltration processes extending deep into the brain (or cord) substance.

In the pons irregular patches of degenerated tissue could be made out, in which a degeneration of the pyramidal cells was the most noticeable feature." In this case the Wassermann and lumbar puncture were negative.

ARCHIVES OF DIAGNOSIS.

(October, 1913, vi, No. 4.)

Abstracted by CHARLES T. SHARPE, M.D.

A DIFFERENTIAL STUDY OF PRURIGO NODULARIS AND URTICARIA PERSTANS. RICHARD L. SUTTON, p. 341.

Sutton reviews the literature and devotes special attention to the histopathology of acne urticata, "A Rare Papular Disease Affecting the Axillary Region," prurigo nodularis and urticaria perstans, and gives a clinical report of a typical

case of prurigo nodularis, pointing out its similarity to Fox and Fordyce's "papular eruption of the axilla." "In one of the specimens stained by Bielchowsky's method, an excessive number of encapsulated nerve endings were found in some of the papillæ. These organs, which were of considerably less bulk than Meissner's tactile corpuscles, were irregularly arranged (not unlike a branch of cherries), in the long axes of two slender but much elongated papillæ, and were undoubtedly subject to undue pressure from both the immediately adjacent inter-papillary bodies and the more distant, but no less effective corneous plugs which projected well down into the rete."

He then reports a fairly typical case of urticaria perstans, giving the results of a careful histopathological study. The treatment that proved most successful consisted in the use of Bronson's oil and carbon dioxide snow.

Photographs and microphotographs accompany the article.

IN MEMORIAM.

DR. G. H. ARMAUER HANSEN.

The members of the American Dermatological Association wish to place on record their appreciation of the great work of our late Honorary Fellow, Dr. Hansen; and our sorrow because he no longer lives to carry it on.

Though most of us have never met him face to face, his name is familiar to us. To him the whole world is debtor because in 1874 he demonstrated that leprosy is due to a bacillus, that it is therefore communicable, and to be kept under control by isolation of its victims, or by submitting them to simple hygienic rules.

Dr. Hansen was born on July 29, 1841, and died suddenly on Feb. 11, 1912, in the 72d year of his age.

His early training was under Danielsen and Boeck, those old authorities on leprosy. He married the daughter of the former. Under his direction a system of isolation of lepers was established in Norway, with the result that between 1857 and 1907 the number of cases was reduced from 2,833 to 445, and the new cases per year from 242 to 19.

Many honors came to him. He was made an Honorary Fellow of this Association. He was President of the International Leprosy Congress in 1910.

GEO. T. JACKSON.

ELECTION OF OFFICERS OF THE AMERICAN DERMATOLOGICAL ASSOCIATION FOR THE YEAR 1914-15.

At the recent meeting of the American Dermatological Association which was held in Chicago, Dr. S. Pollitzer, of New York, was elected President for the year 1914-15. Dr. Martin F. Engman, of St. Louis, was elected Vice-President and Dr. Oliver S. Ormsby, of Chicago, was reelected Secretary-Treasurer.

THE JOURNAL OF CUTANEOUS DISEASES

VOL. XXXII

AUGUST, 1914

NO. 8

SYPHILITIC HEREDITY AND CONGENITAL SYPHILIS.

By WILLIAM P. BOARDMAN, M.D., Boston.

Assistant in Dermatology, Boston City Hospital and Carney Hospital, Boston, Massachusetts.

THERE has been a large amount of work done in the last few years on congenital syphilis. I wish to call your attention to some of the present conceptions in regard to it, and especially in regard to the present much mooted points of maternal and paternal heredity.

Colles' law, established by Colles in 1837 and elaborated more fully by Diday (1876), states that a mother of a syphilitic child is immune to syphilis. Many exceptions to this rule have been published since that time, but Bobrić,¹ in a long thesis, shows that most of these were due to faulty or not sufficiently prolonged observation. Carle² supports this view, and Trinchese adds the last word on some other cases of this sort, showing that the mothers were not infected with new syphilis later, but were really suffering from late syphilis. So that we may fairly say that a mother of a syphilitic infant is always immune from the disease; but most people agree with Fournier that the only way of becoming immune to syphilis is to have the disease, so that we should have to admit that every one of these mothers had syphilis. Others claim that it is a form of passive immunity acquired through the placenta, and that the mother does not necessarily have the disease, but the passive immunity from any other disease lasts only a short time, while here we have a persistent condition. Some claim that the mother must become infected when her circulation is in such intimate relation with that of the syphilitic child, and this is certainly a good argument. But this implies that the child is infected by the father and the mother from the child. Now, the only reason for supposing that such a sequence occurs, if we admit that the mother has syphilis, is the

fact that she has no primary lesion. But Gaucher³ has shown that the number of recently syphilitic women showing a chancre or the remains of it is only 37 per cent., and the occurrence of the primary lesion in syphilitic pregnant women is practically the same (33 per cent.). So that we are forced to the conclusion that the only reason that there is no chancre in these women is that we cannot find it, the same as in non-pregnant women. Therefore, we must discard the idea of the child infecting the mother from merely clinical grounds.

In regard to the part the father plays in infecting the child, it has long been accepted that many men, with known syphilis not well treated, marry and have healthy children. It has also been an accepted fact that men who have been treated for three years carefully are practically safe to get married, provided a sufficient time has elapsed since the last symptom of the disease, but with women the time required is always stated as being longer. Now, this three year limit is actually the time when a man is supposed to be non-infectious for those about him, and therefore for his wife, so that this rule is a support for the theory that the father cannot infect the child except by infecting the mother primarily. Cases which have been followed long enough, as shown above, almost invariably show infection of the mother, or at least an immunity which amounts to practically the same thing, so that from a clinical point alone we can say that the part of the father in infecting the child is nil, and can disregard paternal syphilis, although many of you can doubtless recall cases which, so far as you are able to see, were exceptions to this.

Looking at the subject from the laboratory viewpoint, the spermatic fluid has been found infectious for syphilis on rabbits and apes only in one or two instances,^{4, 5} and these were either cases of florid syphilis or of a syphilitic lesion along the genital tract; but we know that in the continual marital relations the thing is quite different from the single injection into the animal, and there are several cases of pure spermatic infection where neither of these two conditions were fulfilled. So we must come to the conclusion that there are *spirochætæ pallidæ* present in the fluid, although they have never been demonstrated by the microscope. But this does not mean that they are within the spermatozoa, which, from the size of the wiggling *spirochæta pallida*, would be practically impossible. In regard to the question of their getting into the ovum and infecting it, it seems hardly possible that this could occur without disturbing the ovum so that it would not develop and the *spirochæta* would not

long survive, because it has been shown that it cannot live on egg albumin alone, but needs differentiated cells, which are not present in the ovum. Both of these possibilities have been carefully worked out in animals with other spirillæ, and the results are the same with them.⁶ Therefore, from a purely biological viewpoint, infection of the ovum is absolutely impossible. After conception, it is a well-known fact that the cervical canal is closed by membranes and infection of the fœtus by the semen is naturally impossible. Thus we come to the same conclusion from a different side, that paternal syphilis is impossible.

Since the Wassermann reaction has come into the field, another light has been thrown on this important subject. It was noted very early that a large percentage of women who bore syphilitic children showed a positive Wassermann reaction.⁷ Many investigators found quite different results, varying from 50 to 90 per cent., but the average seems to be about 75 to 85 per cent. It has also been shown that these figures are much higher if taken from the cases who have quite recently borne syphilitic children, rather than including all who have had them even years back. Many of these women showed absolutely no other signs of the disease. Now, these are pretty high percentages, but in themselves alone offer a very good argument for the paternal origin of some cases of congenital syphilis; but on further investigation it is shown that many of those showing a negative reaction are included in the cases whose examination or history show an undoubted syphilitic infection, so that the cases of syphilis in the mothers is much higher than these figures show. Moreover, in many of those with a negative reaction, we find spirochætæ in the fœtal cord, and also in the placenta, especially in the intervillary spaces. Now, it is hardly conceivable that the germs could be there without infecting the mother. So here we arrive at pretty nearly the same conclusion, namely, that there is no such thing as purely paternal syphilis. The mother is practically always syphilitic.

Now, as a corollary to this, let us consider how the conception that there is no such thing as pure paternal syphilis affects us in giving our permission to syphilitics to marry.⁸ The modern treatment with salvarsan combined with mercury undoubtedly seems to shorten the disease somewhat, but just how much it is still too soon to say, and it seems to me that we must still say that the patient must follow treatment for at least two or three years and wait a year after the last symptoms of the disease before it is safe for him to marry. It has been shown that there are occasional cases

of infection from a man who has had the best treatment and no symptoms since the onset, up to one or two years, in spite of the apparent absence of visible lesions. So it would naturally be expedient to wait until this period has passed. It has also been proved that the late mucous patches which are sometimes seen years after the onset of the disease are really secondary lesions and are infectious, so that if the patient has a disposition to recurrences of these, it is a good plan to wait even longer after the last symptoms, to make sure that they are not going to return. It has been noted by most writers, however, that these are much less frequent after the treatment with inunctions and injections and with salvarsan than they are in cases treated with pills, so that we seldom see them now. On the other hand, if after we have waited all this time, the patient still shows a positive Wassermann reaction, or has a typical tertiary manifestation of the disease, this should not be considered as a ground for his postponing the marriage longer, if he is willing to follow up the treatment afterward for the sake of his own health. But a man in this condition need have no fear of infecting his wife, for there is no case on record of infection from a tertiary lesion clinically, though active spirochætæ have been demonstrated in the lesions, which are infectious for animals, but only under conditions which could never occur clinically. And if he cannot infect his wife, there is no possibility of having a syphilitic child. In regard to the time when a woman should be allowed to marry, we are still in doubt, but one should try to have her wait until there had been a negative reaction for a year and a half or two years after all symptoms and all treatment are stopped. I can find no instance in the literature where such a case has shown further signs of syphilis, and according to our present opinions, such a one is cured, though the time is too soon to speak definitely on this point.

Next let us consider the effect of syphilis on the offspring. There seem to be two forms of heredity: first, the transmission of the actual disease, which we have already shown is almost invariably due to maternal syphilis, if not always so; second, the indirect or dystrophic heredity. This consists in malformations and faulty mental and physical development, which are not truly syphilitic in nature, but seem to be in some indirect way dependent on it. This form can undoubtedly be transmitted by the father as well as the mother.

It is of the first of these that I wish to speak particularly. Its first great effect is fetal and infantile mortality. Taking the first, I am surprised to find on reading over the literature of the last few years that syphilis is not such a common cause of accidental

abortions as we were formerly led to believe. Marcus⁹ finds it the cause of 17.2 per cent. of a series of 116 mothers of stillborn children and abortions. When these cases are separated, however, the abortions in the first months of pregnancy in syphilitic women are quite uncommon occurrences, according to Reischig,¹⁰ who found in 500 pregnant women only 0.78 per cent. abortions, and Weber only one abortion in 35 pregnant women with syphilis. Trinchese, in 6 cases of habitual abortion, some with syphilis, found another cause such as retroflexion or a chronic endometritis in all but one of them, and he comes to the conclusion, after a review of the literature and considerable work of his own, that syphilis is a rare cause of abortion, and, when syphilis is present, some other cause is generally present, and not the syphilis *per se*, as the ætiological factor of the abortion. I have done Wassermann reactions on all the cases of abortion that have come into the City Hospital for the last few months, and several in private practice, including several of repeated abortions, and in only two cases have there been found positive Wassermann reactions or clinical signs of syphilis.

Miscarriages (fourth to seventh lunar month), if the child is born alive, according to Trinchese and others, are seldom due to syphilis, but if born dead, syphilis is the cause quite frequently (35 to 40 per cent.), and much oftener toward the end of this period.

Premature births, especially at about 8 months, are very frequently due to syphilis, about two-thirds of all syphilitic children being born at this time, mostly at the eighth lunar month.

Children born at full term and syphilitic are the exception, consisting of only about 5.5 per cent. of syphilitic children.

As to the time when the child becomes infected, little is known, but from comparative studies in other diseases in animals and from the severe general septicæmic character of the infection as it generally appears in the newborn, it is probably of short duration. Instances are quoted where a child was born with fully developed syphilis two months after the mother was exposed to the infection, or about four or five weeks after the disease became general in the mother. Many instances are quoted of mothers acquiring syphilis in the latter half of pregnancy and giving birth to children with the disease fully developed. If this hypothesis is correct and the curve of incidence of the birth of the syphilitic children is recalled, most of the infections of the child probably take place in the latter half of pregnancy. This is quite reasonable when we consider that the placenta increases in size in about the same curve as this, and then we would suppose that the chance of infection through it would

be increased. The placenta is found diseased in only about 25 to 60 per cent. of the cases of congenital syphilis, and in these cases the child is generally born alive, so that the cause of the separation of the placenta and premature birth is probably the death of the foetus.

Next let us consider the effect on the child, if it is born alive. Engel and Reimer¹² state that children showing symptoms in the first 4 weeks of life nearly all die; of those showing them in the second month, two-thirds die, and in the third month about a half die. Only about 28 per cent. of children born syphilitic survive the first year. As to the Wassermann reaction in the newborn, Müller¹³ gives a large series, showing that in those infants with active symptoms, nearly all are positive, almost the only exceptions being those who are immediately overwhelmed with the disease and die almost at once or in a day or two. Those children born apparently healthy, but of syphilitic mothers with active signs or a positive reaction, show a positive reaction in about 40 per cent. of cases, but many more develop a positive reaction in a few weeks or months, often accompanied by the onset of syphilitic symptoms. It is more frequent in the children born of mothers showing active symptoms during pregnancy than in the children of latent syphilitic mothers, but the difference is not startling. Children of mothers who have had syphilis, but at the time of pregnancy show a negative reaction, show a positive in only 12.5 per cent. of cases, increasing somewhat as the child grows older or as active syphilitic symptoms develop.

The number of negative reactions persisting with no signs of syphilis in the child suggests that these are exceptions to Profeta's law, that the apparently healthy child of the syphilitic mother cannot contract syphilis, though this may not hold throughout the child's life. In other words, the child of a syphilitic mother is always syphilitic. Bertha Sabin¹⁴ has gone into this subject very carefully in the past year. She concludes that where the mother has syphilis at the time of conception or acquires it in the first 5 months of foetal life, the child is almost invariably syphilitic; in the sixth month it is only probable; after the sixth month it is rare, but there are exceptional cases of infection of the child when the mother contracts the disease even later. These late post-conceptional cases are therefore the only exceptions to Profeta's law, and the other children are really cases of latent congenital syphilis, though there are no signs of the disease and the Wassermann reaction is persistently negative for months. Clinically, practically the only exceptions are these post-conceptional cases. We should, therefore,

in such cases try the Wassermann reaction in the infant, and examine the placenta and cord, if the child shows no signs of the disease clinically (Poppi¹⁵). This will show the presence of syphilis in a large percentage of cases, and if it does not, and the case is one of late post-conceptional syphilis, the child should not be allowed to nurse, as infection from the nipple is not too rare in such cases. In regard to the Wassermann reaction made later in life in these syphilitic children, Churchill¹⁶ and Kellner¹⁷ and others¹⁸ have noted that it begins to disappear after 4 or 5 years, in spite of the persistence of perfectly definite stigmata, though it nearly always reappears with the appearance of active symptoms of the disease.

Many authors lay great stress on the value of examining the placenta and cord histologically and bacteriologically. Marie Wer-silova¹⁹ found spirochetæ in the placenta or cord in 62.5 per cent. of cases, and Grafenberg²⁰ in 50 per cent.

Now, as to the clinical picture of the newborn syphilitic child. The typical one has the well-known old man appearance, with feeble cry, wrinkled skin, and general appearance of the premature child. Many are born as fine, healthy-looking children, though the usual initial loss of weight in the first week is much more marked than normal, and unless it receives energetic treatment, it continues to go down, instead of returning to normal in the second week, and the child gradually fades and dies. If this fall is stopped, the return is very much slower than in healthy children. If the child survives, it almost always shows a weakened constitution in its susceptibility to all sorts of infections during the first year of life, especially tuberculosis. Marcus⁹ shows that of the deaths of syphilitic children in their first year of life, only 25 per cent. were due to syphilis *per se*.

Of symptoms in the new-born syphilitic, the commonest is coryza, the well-known snuffles. Then there are the severe skin lesions, which are apt to be pretty well generalized, corresponding in a way to the secondary type of syphilis in the acquired form. The best known is the pemphigus type. The visceral changes are apparent in the enlarged liver and spleen and the so-called pneumonia of the new-born, which is really not a pneumonia, but a syphilitic process in the lung which prevents expansion. The lymph glands are often enlarged, and McCarthy has shown that the enlarged epitrochlears are of considerable diagnostic importance. They are often enlarged in other diseases, as scarlet fever, and especially in rickets, but these are almost unheard of before the sixth month. Any trouble with the skin of the hands, as an eczema, or trouble with the joints of the hand or

wrist must also be excluded as a cause of the adenitis, before considering them as syphilitic, but this can usually be done in these young infants. Discharging ears are very common in these infants, though their nature is probably not syphilitic, and they must be considered more as an expression of the low resistance of the child. A common occurrence with these infants is sudden death without apparent cause. Bennet-Labordérie²¹ has investigated this in those children that die almost immediately after birth, and finds that many of them die of asphyxia due to the greatly enlarged abdominal organs, often accompanied by ascites, which interfere with the proper expansion of the lungs. He reports autopsy findings to support this view. Another important change is found by the X-ray, which shows an osteochondritis of the ends of the diaphyses of the long bones in a very large percentage of cases, many showing no symptoms of trouble. Fabre and Rhenter²² have noted these troubles post mortem in 74% of cases of syphilitic children, and say that it occurs from the sixth month of foetal life and persists up to 3 or 4 years of age. Mensi²³ has also noted this change where there were no clinical signs during life. Alexander²⁴ has also noted a marked delay in the ossification of the vertebræ, not seen in any other disease of infancy or intra-uterine life. Another early sign is optic neuritis. Beck and Mohr²⁵ have studied this in infants from 8 days of age to 3 years, and find it present in 62 out of 126 cases of congenital syphilis, while the papilla was abnormally pale in 16 more such cases, together making about 65% of all cases examined. Other authors given even higher figures, varying from 75% to 82%. The disease evidently runs a rather acute course, as it is much less common in older children, but it often persists after the skin lesions and other early signs have entirely cleared up, so that it seems to be of considerable diagnostic importance. It is frequently accompanied by no disturbance of vision or other subjective symptoms, in spite of a marked papillitis.

We now come to what is to me the most interesting part of the subject, namely, late congenital syphilis. The question as to whether this can occur without previous symptoms is still being argued, but it is sure that the majority have shown some slight signs, often escaping the attention of the parents and the medical attendant. This is indicated by the unmistakable signs of previous trouble, as shown by scars about the mouth and the like. Whether it can appear for the first time in later years of life is certainly very doubtful. In trying to make the diagnosis in a case of late congenital syphilis, we should first attempt to obtain a careful family and personal history, then examine the patient, and, if possible, examine also the other mem-

bers of the family, which often gives us very important information about the presence of syphilis in the family. The examination of the patient himself, of course, is the important thing. His general appearance often leads to a suspicion of the disease. The type of these children is below par, mentally and physically. Physically he is below normal in stature, pale, delicate-looking, possibly with deformities of various kinds. In general, the picture of a child is that of one who has been a constant care and has gone through any number of children's diseases. On the contrary, there is the exception to this type in the overfat child, of which Fournier cites three cases. Mentally they are almost invariably behind their mates at school, learn to walk and talk late, and very evidently are backward children.

Beginning the physical examination in more detail, the head first attracts our attention. The skull often shows bosses on the parietal or frontal bones, sometimes a general prominence of the frontal, which seems to protrude from the head. Irregularities of the skull are frequent, and an asymmetry of the face is often noted. There may be the saddle-back nose, due to falling in of the bony parts, or there may be (more rarely) the nose "en lorgnette" from previous trouble with the cartilaginous portion. The saddle-back deformity is sometimes seen at birth and sometimes develops later. A high, arched palate is very common, and also adenoids and tonsils with the facies, which usually accompanies these troubles in non-syphilitic children. The lower jaw is often narrowed from side to side and often protrudes beyond the upper. The shape of the ears may show the widest deviation from the normal.

Hutchinson's triad is pathognomonic of syphilis when it occurs, but is certainly very rarely seen.

The most characteristic ear trouble with syphilis is sudden bilateral deafness, coming on without assignable cause, and with no other symptoms than the increasing deafness, which is soon complete. Examination with the speculum shows nothing abnormal, and the trouble is probably in the auditory nerve endings, in the internal ear. Treatment has practically no effect, and the child is soon irrevocably deaf for all time. Mutism usually develops as a result before long.

Among the eye troubles we have already spoken of the frequency of optic neuritis in early infancy. The commonest active lesion in these older children is interstitial keratitis and next is iritis. But still more frequently we find the evidence of previous serious trouble in the form of scars. The history often gives a story of previous serious, long-standing troubles in both eyes, unaccompanied by pain,

but often with complete blindness for a time. The scars may be those in the cornea of a previous keratitis, but more often are in the retina and choroid, and less frequently in the iris. Convergent strabismus is fairly common.

The teeth may show the well-known Hutchinson's type, which are the convergent, peg-shaped (or, better, as the French call them, "screw-driver shaped"), notched upper middle incisors of the second dentition, but these are not very commonly found. All the changes in the teeth are developmental changes due to trouble in the first few months of life, when the hardening of the enamel of the teeth of the second dentition is taking place. Any trouble sufficient to interfere with this hardening of the enamel of the milk teeth would probably kill the child, as it would have to occur in the first eighteen weeks of intrauterine life, and children affected as early as that almost invariably die *in utero*. The so-called erosins on the teeth are, then, not erosions but lack of enamel present from the start. The erosions commonly seen on the permanent incisors and the first molars are quite characteristic of syphilis. The poorly developed tips of the molars and the canines, with the horizontal shelf below, are quite often seen. Microdontism, especially of the incisors, and irregularity of the placing of the teeth is frequent. The separation of the upper middle incisors is a point to which Gaucher has called particular attention in the last year. He considers it fairly pathognomonic of syphilis.

SKIN AND MUCOUS MEMBRANES. We often find scars in the skin with typical circular and polycyclic borders, and little collections of scars in the form of a bouquet. The fine radiating lines about the mouth and especially at the corners are quite characteristic. The scars on the thighs and buttocks, very faint, often seen only by cross lights, are very suggestive of previous trouble. Of the active lesions in late hereditary syphilis, we sometimes see typical tertiary ulcers. Sequeira²⁷ calls attention to a form of these that is usually seen upon the face or palate, and often about the nose. Its appearance resembles that of an ordinary lupus, but on examination the bony parts are infected, and the history shows that it has been much more acute than an ordinary lupus. The lesions respond rapidly to intensive antisymphilitic treatment, which should be instituted as soon as possible, to avoid the severe destruction that is sure to follow if the process is allowed to continue very long. Findlay and Watson²⁸ have lately described a lesion resembling eczema, which, apparently, is nearly always of a congenital, syphilitic nature. The lesions are at one or both angles of the mouth, radiating off into a fan-shape,

often implicating the mucous membrane of the mouth. The outlines are fairly sharp. The lesions are dry and scaly but may, during exacerbations, discharge and become crusted, with even some induration. Similar conditions also are seen about the eyelids and nostrils. The condition is very obstinate, sometimes lasting for years, without entirely clearing up at any time. The Wassermann reaction was positive in all of the 21 cases observed, and all responded rapidly to antisyphilitic treatment. I have seen one similar case at the Carney Hospital, which I treated without any success for a seborrheal eczema until the appearance of an iritis suggested that it was one of this form of rashes. It entirely cleared up under antisyphilitic treatment in a few days.

GENITO-URINARY ORGANS. There is very apt to be a general lack of development here, both in the male and female. Puberty is apt to come late and the growth of pubic hair is scanty. There may be anorchism or undescended testicle, but the more common condition is a small, sclerotic testicle. The kidneys may be affected quite early in the disease, causing albuminuria and suppression of urine, but this is rare. Browning and Watson²⁹ have gone over the literature of paroxysmal hæmoglobinuria and report several new cases of this trouble. They report that most of the cases were in children and the majority showed signs of congenital syphilis. Of 59 patients tested, 90 per cent. showed a positive Wassermann reaction, also. So that there would seem to be some connection between these two diseases.

BONES. Savariaud³⁰ and Addison³¹ have independently gone over the subject of syphilitic diseases of the bones in children and infants, during the past year. There is an inflammation of the diaphyses of the long bones near the epiphyses, which occurs almost invariably during the first 6 months of life. Although the symptoms may be from only one bone, the X-ray frequently shows the disease to be symmetrical, and often affecting all the extremities. The affected limbs show a pseudoparalysis due to the marked pain and tenderness on motion. There is, generally, some œdema and a very tender tumor about the end of the bone. It may go on till separation of the epiphysis and crepitus is obtained, which makes the diagnosis from fracture due to trauma often very difficult. Later in childhood we find periostitis of the long bones or of the bones of the skull and face. This may be a diffuse process involving the whole of the diaphysis with general enlargement of the bone, or it may appear in bosses. There is, nearly always, severe, persistent, nocturnal pain. The disease starts in the solid bone and grows out to the periosteum

and into the medulla, hard bone being formed around it and sequestra being left inside. After breaking through the periosteum it affects the soft tissues, breaking through and leaving sinuses. Now the case is very much like the ordinary osteomyelitis, and, due to the secondary infection with pus cocci, is bound to be a very slow-healing condition in spite of antisiphilitic and surgical treatment.

In connection with the diseases of the bones, I would like to mention the scaphoid scapula. The chief characteristic of this is the concave vertebral border. Graves has made a careful study of this condition and finds that it is present in a very large per cent. of persons whose fathers or grandparents have had syphilis. It seems to occur in other conditions, however, and its value is not very great as a diagnostic aid in congenital syphilis. It would seem to be the result of a weakened general constitution. Kellner found it in 40% of feeble-minded children.

JOINTS. A chronic, bilateral, painless, symmetrical hydrarthrosis, usually of the large joints and especially the knees and elbows, almost always is due to congenital syphilis. The only discomfort is from the limitation of motion due to the condition, but no pain is present and the disease progresses very slowly. There is another chronic condition of the joints, which, generally, is non-articular and is accompanied by no effusion into the joint. There is considerable spasm and muscular wasting. Usually it is in the large joints (elbow, knee or hip). The X-ray shows a focus at the end of the diaphysis. This is very hard to distinguish from the tuberculous joint, and I have seen one such operated for tuberculosis, with disappointing results. These two forms of joint troubles can occur at most any time from infancy to early adult life. Fournier also mentions a form of chronic arthritis deformans, affecting young subjects, which is due to syphilis. Its occurrence in the large joints primarily, and the young age of the patient are the points which distinguish it from the ordinary arthritis deformans.

VENOUS SYSTEM. A sort of weakness of the venous system has long been noticed in congenital syphilis. It is very commonly shown by the dilatation of the superficial veins of the scalp in young infants, which is often very striking. In later years varicose veins of the legs are seen, often accompanied by ulcers which have the combined characteristics of siphilitic and varicose ulcers.

NERVOUS SYSTEM. Nervous troubles may be merely functional, neurasthenic symptoms, or they may go on to severe dementia and idiocy. Kellner¹⁷ has studied the condition carefully and finds about 5% of idiotic and feeble-minded children are siphilitic. On the other

hand, Kate Fraser and Watson³³ have taken up the subject and found in Scotland that the percentage rises to 60%. The latter authors had to do only with young children and they also looked over the whole family in many cases, making the diagnosis from positive results in the brothers or sisters or the parents of the children in some instances. But even this does not explain the great difference in the figures. Other authors find occurrence of syphilis in this class from 5% to 12%. There may be cerebral deformities, such as microcephalus, hydrocephalus or asymmetry of the two halves of the cerebrum, but these have nothing in them to characterize them as syphilis. An important symptom, which might suggest syphilis, is severe nocturnal headache in a child, not responding to ordinary treatment. There may be slight spasms with them, and these may grow worse until the child has true convulsions. These are often the cases which later develop true epilepsy. Treatment helps the early stages of these troubles, but is of very little avail when true epilepsy is established or when there is a definite feeble-minded condition present.

When we come to consider the subject of syphilis of the second generation we find that there are quite a number of such cases reported. Bloch and Antonelli³⁴ have published another to add to the list in the last year, where the mother of the child surely had congenital syphilis and the father was apparently healthy. The symptoms of this form are much the same as those of congenital syphilis in a general way.

TREATMENT. In regard to the treatment of congenital syphilis, the Wassermann reaction has taught us, as nothing else has done, that we must continue the treatment for at least three or four years, and make it most intensive if we are going to cure the disease for good. Welde³⁵ has shown how necessary this is among foundlings if we are going to prevent the dissemination of the disease through these children. Marcus has shown the beneficent effect on the child of treating the mother during pregnancy. He finds that a much higher proportion of the children are born at full term and the majority of them apparently healthy if we treat the mothers carefully at this period. Trinchese has shown the same thing and makes a plea for beginning the intensive treatment as soon as the diagnosis of pregnancy is made. He says that if the child is once infected, treatment of the mother will be of very little avail, but that this generally does not take place until the latter half of pregnancy, so that there is every chance of avoiding it if the treatment is begun early.

As to the treatment of the infant, Strathy and Campbell³⁶ and Holt³⁷ in this country, Blechmann³⁸ in France, and E. Müller³⁹ in Vienna have accomplished a great deal by combining the mercurial treatment with salvarsan or neosalvarsan. Two or three doses of the salvarsan or neosalvarsan are given at intervals of two or three weeks, into the external jugular veins or into the scalp veins in a concentrated form, the dose being 0.01 gram of the salvarsan or 0.015 gram of the neosalvarsan per kilo of body weight, varying somewhat according to the condition of the infant. These are repeated again after an interval of a few months, and a third time if necessary. In the meantime the child received inunctions, or better still, injections of **mercury**, in courses lasting about two weeks and separated by periods of rest. The soluble injections are used during the first three months of life and later the salicylate. These courses of mercury are kept up for three or four years, gradually lengthening the periods of rest between courses. The Wassermann reaction is pretty obstinately positive in children, but can be turned to negative finally in almost every case. Children stand mercury very well, but the continued use of pills is sure to upset the digestive tract, before long, and has to be discontinued. The inunctions are well borne for a while, but finally irritate the skin. Mercurial baths are seldom used now, on account of the inaccuracy of dosage, and the fear of poisoning where there are breaks in the skin. Potassium iodide is very poorly borne in children and should only be used in cases where there is a gumma to be absorbed. In cases where it is used, it should not be given in more than one to three grain doses daily during the first year and the child should be watched for symptoms very carefully, such as œdema, tracheitis, coryza (if this is not already present), and iodine eruptions.

Very few unpleasant results have followed the use of salvarsan in infants, and the use of this with mercury usually clears up the lesions more quickly than the mercury alone. Müller shows that it is no better than mercury in these cases, if used alone, though some do not agree with him. The dose should be halved in markedly cachectic infants. The symptoms respond pretty rapidly to anti-syphilitic treatment of any kind except the coryza, which often persists for months. The younger the child the more promptly will efficient treatment effect a permanent cure of the disease, as Strathy and Campbell have shown.

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NOGUCHI'S LUETIN TEST FOR SYPHILIS.*

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THROUGH the courtesy of Dr. Noguchi we have had for nearly two years the opportunity of using his luetin reaction as a test for syphilis.

The test has been carried out after Noguchi, by injecting with a fine hypodermic needle a small drop of solution, consisting of two parts salt solution and one part luetin into the body of the derma, so that a wheal is raised; for a control we for a long time injected a solution of the same composition, except for the absence of the dead syphilitic spirochætæ which are contained in the luetin. This procedure later was stopped as unnecessary. When the test is negative there is no reaction or a faint inflammatory reaction which disappears shortly. As Noguchi warns, the attempt should not be made to interpret a reaction within forty-eight hours after the injection, and an evanescent reaction, subsiding within two or three days, should not be regarded as pathognomonic. In cases of positive reaction there develops by the third day a red nodule, often dark and angry looking, with a wide red halo; at the same time, as a rule, a similar reaction, but usually of less degree, develops in the control. On the third day confusion might often occur if an attempt were made to distinguish between the control and the luetin reaction. Invariably, however, in our experience, the reaction in the control quickly subsides. By the fifth day it has greatly diminished or almost disappeared and by the seventh day it is gone; while the luetin reaction persists, showing often no subsidence on the fifth day and remaining distinct on the seventh. This difference between the course of the two lesions always occurred, so that there was no difficulty in determining the specific character of the luetin reaction as against the reaction in the control. In the negative cases, no similar reaction—as a rule, indeed no reaction at all—occurred, in either the luetin or the control.

In one case of late syphilis with many ulcerating gummata, in

* Read before the 38th Annual Meeting of the American Dermatological Association, Chicago, Ill., May 14-16, 1914.

which there was a negative Wassermann, a very intense luetin reaction occurred, ran its course and disappeared, and twenty-seven days later, spontaneously recurred and ran a course identical with the first. In eight cases the reaction was subjected to a double test by repeating it; in all of these cases, the revaccination gave the same result as the first had given, except two cases of active late syphilis which gave negative results on first inoculation, but on repetition of the test at intervals of one month and nine weeks respectively, gave distinct positive reactions. Another case, with a history of luetic infection seven years before and several abortions but showing no evidence of active disease, gave a negative luetin and negative Wassermann. She became pregnant soon afterward and aborted again. One year later, she appeared for a repetition of the tests, as she was again pregnant. The serum reaction was still frankly negative but the luetin gave a distinct but delayed reaction. On treatment she successfully carried her child to term, and was delivered of a healthy baby.

One case cited in our table, recorded as of doubtful diagnosis, was that of a middle aged woman with negative history as to syphilis, who complained of severe neuralgic pains in the suboccipital region. A skiagraph gave some suspicion of a periostitis of some of the cervical vertebræ. Three Wassermann tests at intervals of about two weeks were frankly negative. The first luetin was also negative; but the second, fourteen days afterward, gave a strong positive reaction. This patient received no benefit from mercury and iodides over a period of about two months.

Our tables record the results of the test in 334 cases; 255 cases of syphilis, and 79 non-syphilitic cases.

In 7 cases of primary syphilis with chancres still present, the test was negative in all, although 2 gave positive Wassermans.

It was used in 104 cases of secondary syphilis with only 21 positive results, while the Wassermann was positive in 91 of these and not made in 7. This experience indicates, as Noguchi readily admits, that the test is of little value in early syphilis. In early syphilis, fortunately, there is the least need for it.

In late syphilis—tertiary—its showing is much better. In 122 cases of late syphilis—syphilis in the stage of gummata—89 cases of which were active and 64 of which gave a positive Wassermann, there were 68 positive reactions. Sixty of these occurred in active cases and 6 in latent cases. It is significant of the value of this test as a supplement to the Wassermann, that 18 of the positive luetins in these cases were in cases which gave negative Wassermans.

This also happened in congenital syphilis. Five cases of congenital syphilis were tested; 3 had positive Wassermanns and 1 a negative Wassermann, but this one case gave a positive luetin reaction.

The results in tabes and general paresis also are noteworthy; of 22 cases tested, 11 cases, just 50%, gave a positive result, although the Wassermann was negative in 15 of these cases. Eight of the 11 positive luetin reactions were in cases giving frankly negative Wassermanns.

For control, the test was used in 79 non-syphilitic cases, each showing a negative Wassermann. In none of these was there a reaction. This list of non-syphilitic cases included alcoholic or arsenical neuritis (2 cases), pulmonary tuberculosis (2 cases, one with tuberculide of thighs and legs), Bazin's disease, cervical adenitis (2 cases), parotitis, erythema multiforme (2 cases), pityriasis rosea, lichen planus (2 cases), psoriasis (3 cases), ecthyma (4 cases), syphilis, pediculosis, sciatica, gonorrhœa (9 cases), chancroids and chancreoidal bubo (13 cases), gonorrhœal epididymitis, gonorrhœal arthritis (2 cases), carcinoma (3 cases), furrowed tongue, neurasthenia, folliculitis, pompholyx, condylomata acuminata, varicose ulcer, pustular labyrinthitis, otitis media and cataract, myelitis (2 cases), spinal paraplegia, cerebral tumor (2 cases), angina pectoris, Stokes-Adams syndrome, aortic stenosis, eczema (2 cases), urticaria pigmentosa, acne vulgaris, dermatitis medicamentosa, dermatitis venenata, and three healthy persons.

In only two cases is there some doubt of the accuracy of the reaction; in these the history and serum reaction both were negative and the luetin was an early reaction, already fading on the fifth day. Both of these cases were young patients—one a man of 25, with a second attack of cerebral hæmorrhage (the first six years before), the other a woman of 29, with a cerebral tumor not materially helped by mercury and iodides.

We, of course, offer our experience simply as a contribution to the data that must be accumulated before we can make a final estimate of the value of the test. But as far as an opinion can be formed from our experience, we are impressed that the reaction is a valuable diagnostic sign of late syphilis. Most important of all, the reaction has shown itself specific for syphilis: it has been reliable, and in no instance, excepting the two doubtful cases above cited, has shown a suspicion of a positive reaction in non-syphilitic cases. In early syphilis—in the active primary and secondary periods—the reaction rarely occurs, so that the test is of very little practical use in that stage. But in the later stage of syphilis—the stage

when we are most often in need of diagnostic signs—the test has shown a trustworthy sensitiveness. In 39% of 144 cases of late syphilis the test has indicated the disease, and this percentage would be higher if it were possible to exclude a number of cases classed as latent tertiary which are probably well—cases giving negative serum and luetin tests, after long periods without either treatment or symptoms.

A test that is reliable and that can be elicited in 39% of such cases is an important addition to our diagnostic methods in syphilis, particularly as it may be positive in cases in which the Wassermann fails to show the existence of the disease.

DISCUSSION.

DR. FORDYCE said he had repeatedly applied the luetin test, both in private and hospital practice, and he had found that there was a lack of uniformity, and that the reaction was often absent in active tertiary lesions with a positive Wassermann.

Recently, he had again tried the test in a group of cases at the City Hospital, with the following results: In 10 cases with active tertiary lesions, all giving a strongly positive Wassermann reaction, only 3 gave a positive luetin reaction. One case of hereditary syphilis, giving a positive Wassermann, also gave a positive luetin. In 11 cases within the first two years of infection and under treatment, all gave a positive Wassermann but reacted negatively to luetin.

The speaker said the seeming discrepancies between the luetin and the Wassermann reactions reported by other observers and his own might be partly explained by the fact that the original Wassermann was employed in his cases and that more sensitive antigens were used; namely, those fortified with cholesterin. From his personal experience, therefore, he did not believe that luetin had any advantage over the Wassermann reaction, and he had been forced to the conclusion that it was inferior as a diagnostic agent. It was possible that the method might be refined in such a manner as to be more uniform in the presence of manifest symptoms, or sufficiently reliable to supplement the Wassermann reaction in determining the cure of the patient.

DR. SCHAMBERG said that as the result of his experience with the luetin test he was inclined to agree with Dr. Fordyce that the findings in the later and latent periods did not exhibit much discrepancy between the luetin and Wassermann tests. If only the original Wassermann antigen (alcoholic extract of luetin liver) were employed, one would frequently obtain a positive luetin reaction in the face of a negative Wassermann. Most of such cases would, however, be detected by the use of cholesterinized antigens which were absolutely essential as a therapeutic guide.

The speaker said he was particularly interested in a case of pre-senility of a man who gave no history of syphilis, whose Wassermann was negative and the luetin positive. The man was 40 years old, but looked to be about 60 years of age. In cases where the luetin injections were repeated for experimental purposes at frequent intervals, it was not possible to exhaust the reaction.

The speaker said he regarded the luetin test, as such, as inferior in diagnostic value to the Wassermann, properly made, but the two together gave information that neither one alone could supply us with. In secondary syphilis, after one or several injections of salvarsan, a positive luetin reaction was often obtainable. One difficulty with the luetin test, as well as the Wassermann, was that in some instances border line reactions occurred, which were difficult or impossible of interpretation.

DR. HAZEN said that, thanks to Dr. Noguchi, they had had the opportunity to apply the luetin test quite extensively, and in their first batch of cases, the test gave a positive reaction in from 50 to 60 per cent. of all suitable cases, all of which had shown a strong Wassermann reaction according to the older technique. During the past winter Dr. Noguchi had sent them a second supply of luetin, and of the 31 cases in which it was used, only one gave a positive reaction in spite of the fact that all of them gave a positive Wassermann. It would seem possible that luetin might vary in potency.

DR. CHARLES J. WHITE asked if any of the members had met with the so-called "delayed" luetin reaction? In the Massachusetts General Hospital there had been several successive cases where the reaction did not occur for some weeks and the resulting lesion consisted of an indolent abscess with central pus formation. Under the microscope this abscess resembled those following the intramuscular injection of salvarsan.

DR. FORDYCE said he had seen the reaction delayed for two weeks, when there was the formation of a pustule, which broke down. The contents of this pustule were not examined. It would have been interesting to determine whether it contained the living organism.

DR. PUSEY in closing said: They also had seen one or two cases where the reaction was delayed; in one or two other cases the reaction was violent with suppuration of the lesion. As to whether the luetin test was superior or inferior to the Wassermann, Dr. Pusey said that he had not touched upon that subject; he was discussing whether it was a specific test for syphilis and one of value. As to whether it occurred in cases which gave a negative Wassermann, that depended largely, as Dr. Fordyce said, upon the accuracy with which the Wassermann was made. If one did a Wassermann so sensitive that it gave a positive reaction in every case of syphilis, of course there would be no positive luetins with negative Wassermans, but personally he did not like Wassermans made with fortified antigens which were always positive in syphilis. He was sure that with safely sensitive Wassermans, negative reactions occasionally occurred in the presence of active syphilis. For control he had given blood from such cases in several instances to one of his colleagues, who also thought he got positive reactions, always in the presence of syphilis and he too had gotten negative results. In such cases one frequently got a positive luetin.

CLINICAL REPORTS.

DERMATITIS EXFOLIATIVA, WITH REPORT OF A CASE.*

By J. W. MILLER, M.D., Cincinnati.

Instructor in Dermatology, Medical Department, University of Cincinnati. Dermatologist to Good Samaritan Hospital.

THE difficulty of attempting to classify the various forms of skin eruptions associated with a generalized exfoliation is appreciated by those who have encountered the condition. The ultimate arrangement of these various types is still to be made, so that at the present time the essayist believes the report of cases is of great importance.

* Read before the Section on Specialties, Cincinnati Academy of Medicine, May 4, 1914.

It will be seen from the following history that all the symptoms of pityriasis rubra of Hebra, except the atrophy, were present, and the absence of this one symptom requires us to speak of the condition as dermatitis exfoliativa.

Although classical cases of pityriasis rubra, as described by Hebra, associated with an abundance of exfoliation, progressive cachexia and death are still observed and reported, it is evident that a modified form of this affection with temporary remissions is at times seen.

In an article appearing some years ago, Bowen¹ states: "It is difficult to confute those who believe in a benign form of pityriasis rubra (Hebra), and granting that it may exist, it is hard to determine at times where forms of generalized exfoliating dermatitis of Wilson, with its rapid, acute onset and favorable termination end, and pityriasis rubra of Hebra begins." Ravogli² recently said, "I have seen several of these cases and I can say that if the patient failed to recover, the case was regarded as one of pityriasis rubra of Hebra, while when he recovered it was regarded as a case of dermatitis exfoliativa."

Montgomery,³ whose ideas are in line with present thought as regards the disease, remarks, "Jadassohn's position and the one generally accepted is that pityriasis rubra Hebra is a distinct type, if not indeed a distinct clinical entity, but that Hebra's original conception of the disorder should be slightly broadened to admit into the group some cases in which recovery with or without recurrence takes place, or in which for short periods and in small areas (often as a result of accident) moisture or decided infiltration may be present, or cases in which itching is severe." In recent literature we recall cases of dermatitis exfoliativa in which death occurred within a short period, and in contradistinction to the above we read of pityriasis rubra, Hebra, which was controlled by treatment.

CASE REPORT.

The patient, L. S., was a boy, aged 7 years. The condition in question has extended over a period of five years. It began on the scalp when the child was 2 years of age, with several red, scaly patches over the parietal region. Beneath the thin scales the patches appeared moist; this was soon followed by similar lesions appearing on the ears, neck, back and abdomen. The parts were successively involved. At this time a physician was consulted and it is stated the eruption disappeared. At the age of 4 patches again were noticed, and have never entirely disappeared except for a very short time. One year ago the scaly patches appeared simultaneously upon the dorsal surface of the feet and extended upwards, while the eruption upon the head showed a tendency to downward extension. Seeing the condition about to become universal, the mother experimented with several ointment applications, using rather freely a well-advertised, 15 per cent. tar oil preparation. This apparently made matters worse and she again sought counsel.

EXAMINATION.—The scalp was almost wholly involved, the forehead and ears also showed lesions that could not be differentiated from erythematous and scaling eczema. The skin was bright red, not infiltrated, and covered with fine scales. The scalp appeared moist, weeping occurred in places. Olive oil and

a weak ammoniated mercury application was suggested, which seemed to greatly modify the condition. I did not see the patient again for a year. On his return, I found the scalp in about the same condition as when I first examined him. On the chest, scaly patches were seen, punctate and coin sized. In both axillæ, circinate lesions, extending out and over the pectoral muscles, with sharply outlined margins, appeared. These circinate patches had the same general appearance as those on the scalp—red, scaly and moist. From the waist line down to the ankles the skin was fiery red, dry and covered with fine, branlike scales. The palmar and plantar surfaces were free from eruption. The patient was given two per cent. salicylic acid in olive oil and was told to report for examination in a few days.

Subsequent course.—The various lesions had coalesced and the body was well covered, only the palms and soles escaped. These parts were never involved in the process. The scaling was very marked. The skin gradually assumed a bluish-red color (cyanotic) and there was constant desquamation of dry, rather small scales, in enormous quantities. The patient was extremely sensitive to cold. It was necessary, when the child was exposed for examination, even during the warmest days of Summer, to furnish artificial heat. An oil stove was purchased, but even with this high room temperature, 100° F. and over, he began to shiver and developed a well-marked rigor, in which the teeth chattered and the whole body shook. The patient's temperature, taken per os, reached 101° F., but registered usually 99.5° to 100° F. at the noon hour. Mentally he was quite bright. When his temperature was high, he was drowsy and he was inclined to sleep most of the day. At bed time he complained of itching, most marked at the junction of the inflamed area and the apparently normal skin (ankles and wrists). I could see no evidence of scratching, excoriations or blood crusts. The skin as a whole was markedly œdematous, oozing was observed in patches, especially between the shoulder blades, top of the head, and outer surface of the thighs. With the exception of the moist areas as above mentioned, the skin was thickened, dry and harsh and cracked in places, particularly about the wrists. During the height of the disease, difficulty was experienced in closing the eyes, due in part to the shrinking and contraction of the skin of the face. No marked contractions occurred about the elbows and wrists. The hair was in a great measure lost, the nails were not affected. On the part of the nervous system a tremor was noticeable for a period not exceeding twenty days. The pulse was normal throughout, although a systolic murmur, soft and blowing in character, was heard at the apex. The blood showed nothing unusual.

White blood cells	11,200
Red blood cells	4,800,000
Hæmoglobin	90%
Polymorphonuclears	73%
Large lymphocytes	1.5%
Small lymphocytes	20%
Eosinophiles	5%
Transitional forms	absent
Myelocytes .....	.5%

This count shows a small relative increase in polymorphonuclears, small lymphocytes and eosinophiles.

The lymphatic glands were very much enlarged, especially in the groin and axilla. One could detect the enlargement by sight. The appetite and digestion were excellent; a craving for highly spiced foods had to be checked. Macroscopically, the stools showed mucous shreds. The urine was normal, both as to quality and quantity. Many examinations failed to show the presence of indican.

TREATMENT.—With the exception of quinine, as suggested by Mook,⁴ treatment seemed to have little effect. Beginning early, when temperature was high and exfoliation abundant, quinine bi-sulphate was administered, beginning with grain one quarter three times daily and increasing until the patient was taking two grains after each meal. This dose controlled the temperature, which now seldom registered over 99.5° F. What was noted especially was the patient's feeling of well-being—he was bright, his appetite was excellent, bowels regular and sleep less disturbed by itching. On withdrawing the drug his temperature would rise to 101° F., he would become drowsy, cared less about eating and the use of antipruritic applications was necessary. Believing we had a toxæmia (of unknown character) to deal with, and noting a general œdema of the subcutaneous tissues, Fisher's⁵ sodium carbonate solution suggested itself. This preparation was used per rectum for a number of weeks, with little or no improvement. Winfield's⁶ treatment of psoriasis with lactic acid and high colonic flushing was tried in this affection, but soon discontinued. Locally, Pick's liniment (a jelly-like application made from tragacanth) was used, but it only added to his distress by chilling him. A "shake mixture" consisting of zinc oxide, talcum, starch and glycerine, was found to be satisfactory, but a very thick Lassar paste containing 2 per cent. salicylic acid answered best. This paste was applied daily to the whole surface. A bran bath given every morning was found to be soothing and removed the greater part of the ointment application. As improvement progressed, quinine was discontinued and recently the bran bath was stopped.

PRESENT CONDITION.—The parts still involved in the process of desquamation are the scalp, extending downward over the forehead, three centimetres from the hair line, and several coin-sized patches upon the cheeks. The ears and the margins of the eyelids are also inflamed. Below the waist line are seen several patches about the gluteal region and an area covering the right popliteal space.

There is entire absence of subjective and general constitutional symptoms such as fever and malaise.

The diagnosis of dermatitis exfoliativa was made. It was only after careful observation and study, over a period covering nearly three years, with clinical findings as above outlined, that I feel we would be justified in classifying this case under the title, "Pityriasis Rubra, Hebra, of a benign type."

The principal points on which such a diagnosis might be based are as follows: Onset was slow and insidious; red, squamous patches appeared simultaneously on the scalp and in the articular folds; eventually the eruption covered the whole body. The scales, contrary to those of other types of exfoliative dermatitis, were small. The derma was thickened and œdematous in places. The whole skin was stiff and tense. Itching was moderate. The patient suffered from continual chills. Contraction of the skin occurred, as shown best by difficulty in closing the eyes and some trouble in opening the mouth. The hair became fragile and fell out.

In conclusion, I will say that possibly we should not be justified in predicting recovery, in the case under discussion, but it is plain that the almost complete disappearance of the functional and physical signs, and the immense improvement in the patient's general health, constitute a much hoped for result.

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A CASE OF BROMIDE ERUPTION.

By H. G. IRVINE, M.D., Minneapolis.

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University of Minnesota.

The patient who forms the subject of this report is Mrs. Z., aged 26, married. Her cutaneous history is negative; she has had "fits" for several years and consulted a nerve specialist some four years ago, who prescribed a medicine for her; for three years this medicine was taken, about a teaspoonful three times a day; during the past year only one dose in the evening has been taken, as that seemed to control her condition.

The patient came into my service at the University out-patient department early in January. The lesions were confined entirely to the legs, between the knees and ankles, as shown in Fig. 1. The individual lesions varied in size from that of a pea to one the size of the palm of the hand, were inclined to be fairly round with somewhat irregular borders and consisted of raised, exuberant granulations covered with dirty grayish pus; around the granulation patch was a border, dark-bluish in color. The patient complained of some pain and marked tenderness. She denied having consulted a doctor or taken any medicine. Smears and cultures were made from the lesions but proved negative and the patient was again questioned, this time rather gruffly, as to taking medicine and finally admitted having used bromides.

The pictures were taken Jan. 21, 1914, just after stopping the bromides; at the present date (Feb. 9) the lesions are quite flat and practically healed.

PLATE XXXIII.—To Illustrate "Dermatitis Exfoliativa," by DR. J. W. MULLER
and "Bromide Eruption," by DR. H. G. IRVINE.

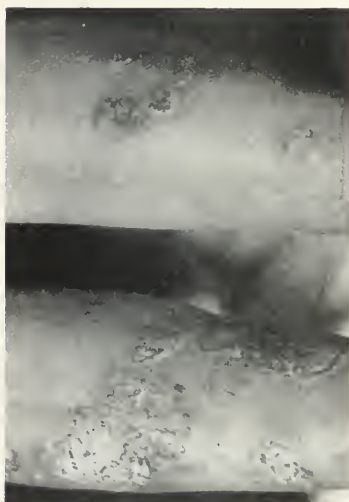


Fig. 2.
Bromide Eruption.



Fig. 3.
Bromide Eruption.



Fig. 1.
Dermatitis Exfoliativa.

SOCIETY TRANSACTIONS.

NEW YORK ACADEMY OF MEDICINE,
SECTION ON DERMATOLOGY.

Regular Meetings, Jan. 6 and Feb. 3, 1914.

WILLIAM B. TRIMBLE, M.D., *Chairman*.

GUMMATA OF THE THIGH. Presented by DR. LAPOWSKI.

Mr. N. was presented at the October 8th meeting, with very extensive gummata-like lesions on the left thigh.

From October 8, 1913, up to the time of presentation, the patient received two calomel injections: on October 8, 1913, 0.3 gm. and on December 5, 1913, 0.1 gm., and the result was very satisfactory. In a period of five weeks the gummata healed, were covered with normal skin, leaving only a narrow line running along the thigh longitudinally, with but two penny-sized, very superficial gummata healing up, but not closed yet. The former infiltration was entirely absorbed, the skin smooth and soft to touch. Such a remarkable improvement after calomel sustained the speaker's first diagnosis of syphilis, in spite of the negative Wassermann, and even a diagnosis of tuberculosis could be excluded, from the rapid and complete disappearance of the gummata, as in tuberculous lesions, calomel produced a slight improvement, but they would not entirely disappear.

CELLULITIS OF THE ARM. Presented by DR. LAPOWSKI.

Mr. R. was presented to the Section on December 5, 1911, with cellulitis of the right arm, due to a supposed intravenous injection of salvarsan (?) in one of the New York hospitals, for enlarged glands, probably lymphosarcoma of the clavicular and axillary regions and of the mediastinum.

During 1912 the cellulitis was tapped, liquid was withdrawn and the swelling gradually subsided; the X-ray was applied on and off, during 1912 and 1913.

At the time of presentation, the original glandular swellings could be easily felt in the right axillary and clavicular regions. The Wassermann reaction was negative. The arm was normal, with all the movements intact.

SECONDARY SYPHILIS. Presented by DR. TRIMBLE.

This patient was shown at the December meeting of the Section, for diagnosis, and acute generalized lichen planus was suggested. Since that time, the eruption had changed its character and had become frankly syphilitic in nature. The Wassermann reaction was positive and the eruption had cleared up wonderfully under the use of salvarsan. The itching, which had been a marked feature when first shown, was due apparently to a complicating seborrhœic dermatitis.

EPITHELIOMA TREATED BY RADIUM. Presented by DR. CLARK.

Mrs. M. R., 64 years old. Fifteen years ago the lesion began as a speck on the nose, gradually grew, would scab from time to time and the scab would fall off

and the lesion bleed. Seven years ago the lesion was burned out under an anæsthetic. After two years it broke out again and was curetted and burned with silver nitrate at the New York Skin and Cancer Hospital. The lesion healed, but broke out again in a few months. It was again curetted and cauterized, but remained healed only for a short time. The patient, when first seen, had had the sore on her nose for between two and three years. Below the lesion was a cicatrix, the result of the treatment of the original lesion. The lesion itself was elongated, about 1 inch long, slightly curved and much elevated, pearly and hard, situated on the right side and extending across a little way on the left side of the bridge of the nose. The lesion was ulcerated and scabbed and was a typical epithelioma of an apparently deep character and presented rather a formidable appearance.

This lesion was given 8 hours' exposure over the right side of the nose and 6 hours over the left half of the lesion and, while a slight redness resulted, there was little or no effect on the lesion itself. The patient was then given as prolonged and frequent exposures as possible and had in all, over each half—right and left—of the lesion, 29 hours of exposure to the radium rays, in a period of 30 days. As much of this as was practicable, because of the patient's age, was administered during the first 5 days, as it was the speaker's effort here to use the prolonged, massive dose method in so far as possible, because of the severity of the lesion. The lesion promptly melted away and remained healed with an unusually good scar for 2 months.

EPITHELIOMA OF THE FACE HEALED BY RADIUM. Presented by DR. CLARK.

Mr. A. H., 47 years old. Occupation, laborer. The lesion first appeared as a papule 10 years ago, which grew and formed a scab, which would occasionally fall off, and the sore would then seem to increase in size. When first seen, one year ago, this lesion had been curetted and cauterized on several different occasions, usually with healing followed by a relapse in a few months. The last operation was about 15 months ago. The patient stated that it relapsed after 3 months.

When seen, one year ago, by the speaker, the patient presented on the left temple a superficial epitheliomatous ulceration, crusted, with a raised, pearly edge, the base considerably indurated, a little larger than a 5-cent piece. After several short exposures—6 hours in 5 weeks—the lesion appeared smooth, except for a small, pearly, nodular area at one side. This, after 3 weeks, showed signs of scabbing and ulceration and was a typical nodule about the size of a split pea. The patient was then given 21 hours' exposure during a period of 1 month, which was all the time he could allow for the treatment, and the lesion was perfectly healed at the end of 6 weeks from the beginning of the second course and remained smooth and well after 6 months. The patient experienced no discomfort, hardly even an itching sensation, while the lesion was under treatment.

ANGIOMA OF THE TONGUE TREATED WITH RADIUM. Presented by DR. CLARK.

Mr. F. S., 21 years old, was born in Russia. He said he had the lesion as a child; it was operated when he was five years of age and got better. It grew worse last year until he was unable to eat without great effort. He went to Vienna for treatment, where he received 54 exposures to radium rays of 4 hours' duration. He had had 32 exposures of 2 hours each to the speaker's radium cell. Some of the superficial vessels in the lesion had apparently disappeared and the front part of the lesion seemed to have diminished in size, followed apparently by a decided improvement in the lesion.

LUPUS VULGARIS TREATED BY THE KROMAYER LIGHT. Presented by DR. CLARK.

S. D., 11 years old, was born in Germany. The lesion began on the cheek as a "boil" several years ago. It had never healed, though he had had much treatment from time to time by curetting, caustics and CO₂ snow. This patient had had hip disease for almost the same length of time and still wore a brace. When first seen, a typical lupus lesion presented, of the size of a silver dollar with some scarring just above it, the result of one of the operations. This lesion was of the thick, raised, succulent, inflammatory variety that had always seemed particularly hard to influence by other means of treatment.

After three exposures, a large part of the lesion had healed, leaving scattered tubercles, which the speaker thought would respond to one more prolonged exposure of filtered light. The last exposure was three weeks ago.

LUPUS ERYTHEMATOSUS UNDER TREATMENT WITH THE KROMAYER LIGHT. Presented by DR. CLARK.

C. H., 38 years old, was of German extraction. This patient's trouble began 8 years ago and spread rather rapidly after typhoid fever. The lesion had been cauterized several times but with little or no effect.

When first seen, he had a solid patch occupying both sides, top and bridge of the nose and extending out on the left cheek for about an inch. This was a very exaggerated, thick, succulent lupus, covered with seborrhæic-like crusts and was selected because of the difficulty one had in dealing with these deep-seated conditions. The patient had very markedly improved, as she will tell you, after from 2 to 3 exposures to each area, healing being present with scarring in scattered areas. The tip of the nose represented the condition after a severe prolonged exposure, 3 days ago. The sides of the nose at the inner angle of the eyes were exposed a week ago, showing the possibility of approaching lupus in that location.

NÆVUS VASCULOSUS. Presented by DR. CLARK.

Mrs. A., 36 years old, was of English extraction. Since birth the patient had had a port-wine nævus occupying most of the right side of the face, right temporal region and right side of neck; altogether, an area of deep-red port-wine nævus, 3 inches by 6 inches, broken up here and there by scars, the result of previous efforts to eradicate the nævus and a few scattered islands of normal skin.

For the past 15 or 20 years, various means had been used on small areas, i.e., caustics, high frequency spark, carbonic snow, electricity, etc., but these were either without result or invariably left slightly scars. Seven months ago the speaker began exposing small areas of this nævus to the Kromayer light, using firm pressure with the quartz window and the blue quartz filter. Exposures varied from 30 to 35 minutes and were regularly followed in from 12 to 24 hours by an erythema; a superficial blistering and finally a superficial crust formed, which dropped off in 10 to 14 days, leaving a dull redness, which in turn gradually disappeared, with the obliteration of the nævus quite regularly, and that without the formation of a scar. In some instances it took a second application of the light to entirely obliterate the nævus tissue. With the exception of scattered, tiny areas of color or minute dilated vessels, that were apparently not included in the numerous areas exposed, and rather disfiguring scars from the old treatments described, the patient presented a fairly normal appearance. Indeed, the patient insisted that not only had no scarring resulted from this treatment, but that old scars which were necessarily included in the exposure, seemed to have been flattened and were less noticeable.

An interesting feature of the case was the appearance of the lesions 6 to 12 hours after exposure. The exposed area in each instance was distinctly darkened

and running through it was seen a network of fine, almost black, straight, curved and irregular lines which were undoubtedly vessels in which the blood had been coagulated as a result of the exposure. In this way, the speaker believed the nævus was obliterated and that would explain the reason why it would be done without a resulting scar.

DR. LAPOWSKI said that he had seen cases of vascular nævi and pinhead angiomas apparently cured by carbon dioxide snow, but in all cases the disease had recurred after a few months.

DR. POLLITZER said that he saw nothing extraordinary in the statement that small vascular nævi could be cured permanently and with a scarcely perceptible scarring by the Kromayer light, which probably acted by obliterating vessels through the formation of thrombi. The case was different, however, with angiomas which were actively growing vascular tumors and which will recur by the growth of new vessels, unless the destruction of tissue is radical. He had seen beautiful results in the treatment of vascular nævi by radium.

DR. CLARK said that superficial vascular nævi treated with the Kromayer light were obliterated with a scarcely perceptible scar. He had not followed his cases longer than four or five months and therefore could not answer for the permanency of the cure.

CASE FOR DIAGNOSIS. Presented by DR. CLARK.

Mr. A. B., 26 years old, was born in Germany. His health had always been perfectly good, he was an apparently well-nourished, strong man; he denied any specific history; no family history of tuberculosis.

Present History. He noticed a little red spot near the tip of the nose two months ago. This spread rather rapidly, became elevated and slightly firm until there was a mass near the tip of the nose the size of a silver quarter, smooth, elevated $\frac{3}{8}$ to $\frac{1}{2}$ inch, circumscribed sharply, of a dull red color, with dilated vessels running over the top of it, and the pores of the skin over the lesion seemed to be rather pronounced. The lesion was in the skin and freely movable on the deeper parts. Subjectively, the patient complained at times of itching.

DR. POLLITZER said that there was here a smooth, round, hard tumor of the nose. The epithelial layer was apparently intact. There were a few dilated vessels. All tumors of the epithelial layer of the skin or of its glands were ruled out by the smooth, even surface and by the absence of lobulation. It was too hard to be a cyst and its perfectly regular ovoid shape ruled out sarcoid and rhinoscleroma. The tumor was probably a fibroma or spontaneous keloid.

DR. LAPOWSKI said he thought that this was a sarcoid. It was too soft for a keloid and lacked the irregular border which was common in that condition. It might be a case of mycosis fungoides d'emblée.

DR. CLARK said that the lesion began about two months ago as a small lump and that the growth since then seemed to have been rather rapid. When he first saw it he thought it was nodular lupus, but had abandoned that diagnosis. He had found in Crocker a description of rhinoscleroma which fitted this case exactly.

ACRODERMATITIS CHRONICA ATROPHICANS. Presented by DR. TRIMBLE.

Mrs. R. S., 55 years old, was born in Russia. She had been in this country 28 years. Married, and had four children.

Ten years ago she noticed redness and itching of the knees, which gradually extended downwards and had slowly increased. As a girl, her occupation kept her standing a great deal and she had always had to work hard. From the toes to a little above the knees the skin was tense and atrophied, and was associated with scleroderma.

DR. POLLITZER said that this case illustrated beautifully the relation between

acrodermatitis atrophicans and scleroderma. They were probably both due to the same or to correlated disturbances of internal secretion.

LYMPHATIC LEUKÆMIA. Presented by DR. LAPOWSKI.

Mr. G. The disease was of 3 months' duration. The temporal, sub-maxillary, sternomastoid, occipital, supra-clavicular and axillary, epitrochlear and inguinal glands were enlarged, especially the sub-maxillary and the glands of the neck. The tonsils were enlarged.

Examination by Dr. Berkeley: Over the manubrium sterni there was a doubtful dullness, probably an enlarged thymus, which was doubtless associated with the lymph-nodes elsewhere.

Blood examination by Dr. Berkeley: Red blood cells: no nucleated forms; no notable secondary anæmia. Cyanosis was rather marked; the count was probably excessive in consequence.

White blood cells: Total leucocytes, 161,000. Polymorphonuclears, 8%. Small lymphocytes, 80%. Large lymphocytes, 12%.

SYPHILIS AND PSORIASIS. Presented by DR. LAPOWSKI.

Mrs. G. was presented before the Section as a case with the simultaneous presence of psoriasis and syphilitic lesions.

Twenty-two years ago the patient was treated by the speaker in a hospital at Warsaw, for syphilis. The patient, her husband and baby were all treated at that time. Fifteen years ago, she was treated in Mt. Sinai Hospital for psoriasis by Dr. Lustgarten. She left the hospital improved and came to the Good Samaritan Dispensary on Oct. 26, 1912. The husband was also seen by the speaker at that time. He had a saddle nose, and scars, the remnants of former gummata, 9 years ago. The patient received a calomel injection in 1912. She returned in December, 1913, with psoriatic lesions on the back, thighs and elbows, and specific lesions on the crura.

The Wassermann reaction was negative on December 18, 1913. While the lesions on the back and elbows exhibited symptoms of psoriasis, the lesions on the crura showed neither the color nor character of the psoriatic scale, nor could papillary bleeding be obtained.

DR. LAPOWSKI said that he saw this patient in this country at the Dispensary in 1910, when she presented psoriatic spots, which disappeared under antisiphilitic treatment. In 1912 she again showed psoriatic lesions, which disappeared under the use of injections of calomel and the use of white precipitate ointment locally. She presented lesions on the back which were typical of psoriasis and others on the leg, which did not show any of the clinical characteristics of psoriasis but which did not resemble syphilis. Under local treatment the lesions on the back had improved, while those on the leg remained the same.

She will be treated with calomel injections and with inunctions of mercury, without local treatment.

LICHEN PLANUS OF THE TONGUE AND CHEEK. Presented by DR. LAPOWSKI.

Mrs. M., 38 years old. Seven weeks ago, the skin, cheek and tongue were affected with lichen planus. Upon the skin there were circumscribed, pea- to penny-size, serpiginous and annular patches and disseminated, single lichen lesions. Upon the tongue there was an elliptic patch of lima-bean size, with shiny centre and raised border. On the cheeks, two penny-size patches, mother-of-pearl like, with distinct lichen papules were present.

Under local treatment the skin lesions disappeared, but the mucous membrane lesions still remained. The Wassermann reaction was negative.

DR. LAPOWSKI said that in November the Wassermann reaction was weakly positive. She was treated by giving a gargle only, and on December 17th, the Wassermann reaction was negative. When first seen, she presented typical lichen planus papules on the skin, which had disappeared without treatment. The lesions on the tongue persisted and were surely lichen planus. They lacked the red border of mucous patches.

ARGYRIA. Presented by DR. PAROUNAGIAN.

The patient, a female adult, was born in the United States. The duration of her condition was about seven years. She stated that she was troubled with some throat affection for which some physician prescribed silver nitrate solution for her to apply to the throat. Without consulting her physician she continued these applications daily for about four years. Gradually she noticed discoloration of the skin, which became more and more pronounced. Discoloration was noticeable over the whole body, including the mucous membranes, though more marked on the face and the hands. It was dark bluish or slate color.

DERMATITIS HERPETIFORMIS. Presented by DR. WISE.

Mr. J. M., 27 years old, born in Russia, was a case from the clinic of the Beth Israel Hospital and was previously treated by Drs. Goldenberg and Levisur.

The eruption appeared 11 months ago, beginning on the face and gradually spreading, with remissions, all over the body. New crops of vesicles appeared continually as old ones dried up. The mucous membranes of the mouth frequently showed denuded areas, where vesicles had appeared.

The general health was good. The urine was normal and the Wassermann reaction negative.

Treatment comprised lactobaciline and Fowler's solution internally, and ungt. Wilkinson externally, under which the patient improved.

"PERLECHE." Presented by Drs. MacKEE and WISE.

Mrs. A. D., 36 years old, was born in Germany. She had two children, no miscarriages. The Wassermann reaction was negative. The lesions on each commissure of the mouth had existed for 8 years and had been resistant to all forms of ordinary treatment. The skin of the body was normal.

The diagnosis stood between so-called "perleche" and chronic fissured eczema.

DR. POLLITZER said that this was a local infection, and in its treatment he would advise strict attention to the hygiene of the mouth.

DR. LAPOWSKI said that he saw many such cases in the Dispensary, and that he found them very difficult to manage. By daily treatment with strong antiseptics, by careful cleanliness of the mouth and skin, they seemed to recover entirely, but they always recurred in spite of the utmost care.

TUBERCULIDE. Presented by DR. BERK.

Mr. F. B., 18 years old. The patient had had the disease for 5 years. There were painless, follicular infiltrations on the upper and lower extremities. Some lesions were undergoing involution, others were healed, with irregular scar formation. The sub-maxillary glands were considerably enlarged. The von Pirquet test was positive, and the general physical examination negative.

MACULO-PAPULAR SYPHILIDE. Presented by Drs. MacKEE AND WISE.

The patient, a young woman, who was from Dr. Fordyce's clinic, presented a generalized maculo-papular eruption of eight weeks' duration. The girl was

exhibited particularly to demonstrate a good example of the mottled chin of syphilis described by Trimble. There were a number of annular and solid, split-pea to dime-sized, scaly, brownish, somewhat confluent macules on the chin. The resemblance to seborrhoeic dermatitis was rather striking.

LUPUS ERYTHEMATOSUS DISSEMINATUS. Presented by Drs. MacKEE AND McMurtry.

The patient, A. M., was a married woman, 57 years of age, from Dr. Fordyce's clinic. The duration of the eruption was one year.

There was one silver-dollar-sized, red, scaly, bald patch on the scalp. The skin in this area was atrophic. There were several poorly defined, violaceous scaly areas on the face. The interesting lesions were on the upper part of the back. Here and there were ten or twelve circinate, violaceous, slightly atrophic lesions, covered with adherent scales. These lesions were superficial and were disappearing rapidly under treatment with the Kromayer lamp.

Dr. TRIMBLE said that he thought there might be an early epitheliomatous degeneration in one of the larger plaques.

LEPRA. NODULAR AND ANÆSTHETIC TYPES. Presented by Drs. MacKEE AND WISE.

The patient, a man of 40, a Greek, was from Dr. Fordyce's clinic. He had been previously shown at the New York Dermatological Society. Since that time there had been a marked improvement under the influence of chaulmoogra oil. The lesions of the face seemed to be improved somewhat by mild applications of the Kromayer light. The disease was first noticed three years ago, after the patient had been in this country for several years.

When presented to the Society, there were bronze-colored nodules on the face and arms. There were also numerous macules of the same color. There was a marked atrophy of the thenar muscles and beginning trophic disturbances. The ulnar nerves were enlarged and there were areas of anæsthesia.

CASE FOR DIAGNOSIS. Presented by Dr. Lusk.

The patient was a young man, aged 24, well nourished, with nothing in the history bearing on his cutaneous disease.

Nine months ago, small vesicles were noticed in the popliteal space of the left leg, which were very itchy. These spread and were not relieved by remedies from the family doctor. When he came to the Post-Graduate Dispensary, eleven days ago, there were two chain-like bands extending from his heel (left leg) to the buttocks, where some disseminated papules were seen. The surfaces of these bands were, at that time, distinctly verrucous and had the appearance of a *nævus unius lateris*.

An ointment of 3% phenol, 6% salicylic acid and 6% ichthyol was given. On his return visit, the warty character had disappeared and the bands, about three-quarters inch apart, were seen to be made up of chain-like papules having the appearance of moniliform lichen planus, with fading papules on the buttock. This was the condition shown on presentation.

At his next visit the same local treatment was continued and he was given one-quarter grain biniodide of mercury. The papules faded rapidly and nothing but stains were left at the end of three weeks. The itching was not relieved until he was given the biniodide of mercury, and then promptly subsided.

Dr. MacKEE was of the opinion that it was a verrucous type of linear lichen planus.

Dr. Lusk, closing the discussion, said that the week before the lesions were

decidedly verrucous in character and at that time he was inclined, but for the history, to make a diagnosis of unilateral nævus. He had also at that time considered a diagnosis of lichen planus.

LICHEN PLANUS. Presented by DR. BERK.

The disease appeared two months ago. It consisted of partly discrete, partly confluent, purplish, smooth, glistening papules around the corona glandis, glans, orifice of the urethra and the scrotum. The lesions on the scrotum presented a beautiful network or bead-like arrangement of annular papules. No other lesions on the rest of the skin or mucous membranes were present.

NÆVUS VASCULOSUS TREATED BY THE KROMAYER LIGHT. Presented by DR. WILLIAMS for DR. CLARK.

HISTORY.—This patient was a female, aged 7 years, and had had a vascular nævus over the right malar region, below the eye, since birth. At first the lesion was small and had very slowly grown until, when first seen, the lesion was the size of a quarter, of a bright red color and very pronounced. There was little or no elevation and it was sharply circumscribed. After one prolonged exposure, using a thick, blue filter, the lesion disappeared, leaving behind one dilated vessel at the centre of the original lesion. This was cauterized with the galvanic cautery which accounted for the small pitted scar. There was no scarring as a result of the Kromayer exposure. There was no apparent tendency to recur after eleven months.

DR. TRIMBLE asked Dr. MacKee if it were possible to cause complete disappearance of a nævus with one application of the Kromayer light.

DR. MACKEE said that in the very superficial type of vascular nævus, a very marked improvement could be obtained by a single application of the Kromayer light, but that up to the present time he had not been able to eradicate the disease completely at one seance.

EXTENSIVE ANGIOMA OF FACE. Presented by DR. WISE.

The patient was a female child, aged 8 months, from Dr. Seff's service at the Beth Israel Hospital. She presented a large vascular nævus of the angioma type, involving the entire lower portion of the face and anterior part of the neck. On several occasions, ulcerations had taken place on the surface of the tumor, resulting in considerable loss of blood. After these ulcerations had healed, there remained a network of white scars, resulting in the spontaneous healing of some areas. The contraction of the scars caused a considerable narrowing of the buccal orifice, so that the child took the breast with difficulty. A portion of the tumor had invaded the mucous membranes of the cheek and the gums.

DR. MACKEE asked if anyone present had seen a nævus of this type in an adult. He was under the impression that such lesions recovered spontaneously.

DR. LUSK suggested the injection of boiling water and related a successful result obtained with this method by Dr. Wyeth.

DOUBLE CHANCRE OF THE LIP. Presented by DR. PAROUNAGIAN.

The patient was from Dr. Pollitzer's clinic at the N. Y. Post-Graduate Hospital; she was a female, 41 years old, a widow, a laundress by occupation. She had two distinct lesions on the lower lip, one about the size of a silver quarter, the other about the size of a dime. They were round, sharply circumscribed and indurated. Spirochætæ were found. The patient stated the duration was three weeks. She had an extensive roseola and the Wassermann was strongly positive.

Before the presentation, an intravenous injection of salvarsan was administered and the lesions were somewhat modified.

CASE FOR DIAGNOSIS. Presented by DR. PAROUNAGIAN.

The patient was a male, 44 years old, and was referred to the speaker by Dr. Smadel, of Indiana. He came with a diagnosis of lupus vulgaris. His trouble started on the upper portion of the forehead, about four years ago, and gradually extended to the scalp, face and neck. The face and scalp were studded with numerous depressed scars, the eyelids were everted and ulcerated. There were pigmented scars on the shoulders and elbows. The patient denied any venereal history. As the speaker had seen the patient only a few minutes, no Wassermann or any other examination had been made. However, from the casual examination, he was inclined to regard it as syphilis and perhaps some additional disease.

DR. MACKEE doubted whether lupus erythematosus would cause such extensive scarring. Syphilis would have to be ruled out before any other diagnosis could be considered.

DR. LUSK believed that the case was one of both lues and lupus erythematosus.

DR. OULMANN thought that the case was nothing but lues, and there was not a spot of erythematous lupus to be found.

LUPUS ERYTHEMATOSUS DISSEMINATUS, WITH MUCOUS MEMBRANE LESIONS. Presented by DR. PAROUNAGIAN.

The patient was a female adult, Russian, and had well-marked lupus erythematosus lesions on the face and extensive lesions on the scalp, of some two years' duration. In addition to these, there were extensive lesions on the lips and mucous membranes of the mouth.

LEUCODERMA. Presented by DR. TRIMBLE.

The patient was a dock builder, and was severely sunburned last Summer. After the disappearance of the dermatitis, a leucoderma appeared on the face and had persisted ever since. The skin, especially on the ears, was slightly atrophic.

CASE FOR DIAGNOSIS. Presented by DR. WILLIAMS.

Mr. T. P., 19 years of age. Single. The patient stated that the disease began as a mole on the right side of the neck. This he cut with a razor, and a "boil" developed, which was cut out at the Vanderbilt Clinic last spring. About a month after the excision, redness appeared in the scar, and had persisted there ever since, spreading into the surrounding skin. He came to the Roosevelt Hospital Nov. 19, 1913, presenting at that time a swelling about $2\frac{1}{2}$ by 3 inches, below the right ear. The affected area was sharply outlined, dull red in color, slightly infiltrated, making an oval, rounded eminence, scaling slightly in the centre. A brown color remained when the lesion was examined under a dioscope. The lungs are normal. Lassar's paste was applied for about three weeks, without affecting the lesion. The patient then disappeared from observation for seven weeks, and on his return showed many thick crusts on the middle of the lesion, the removal of which left a clean, eroded, easily bleeding base.

DR. WISE thought that this was a case of tuberculosis cutis.

Dr. Lusk thought it was a deep mycotic infection, which would clear up under strong parasiticide applications.

MUCOUS PATCHES. Presented by Dr. WILLIAMS.

Mr. D. C., aged 27 years, single, was from Dr. Trimble's Clinic at the University and Bellevue Medical College. Occupation, driver. No genital sore was present. About the first of December he noticed a swelling of the glands under the chin, and soon after a papule under the front of the chin, just to the right of middle line, which developed into an ulcer. Soon after Christmas the throat grew sore and remained so. The sore on the chin healed early in January. He noticed papules in the scalp early in January.

January 29. Roseola beginning. Mucous patches on the lips, floor of mouth and tonsils. On the chin, to the right of the middle line, was a dark brown, slightly scaly patch, without induration. Posterior to this was a mass of firm, enlarged lymph nodes.

EPITHELIOMA OF TONGUE. Presented by Dr. WILLIAMS.

Mr. F. D., aged 48 years, married, was from Dr. Trimble's clinic at the University and Bellevue Medical College. For over a year the middle of the face was red, with many papules. About the middle of October he noticed a sore on the left side of the tongue, which had gradually increased in size, and was quite painful, the pain shooting to the left ear.

The ulcer was on the left border of the tongue, about $1\frac{1}{2}$ inches from the tip, and was about $\frac{1}{2}$ by $\frac{3}{4}$ inch. The surface was smooth, yellowish red, slightly tender; the border was slightly raised and hard. The submaxillary glands were not involved. The Wassermann reaction was negative.

CASE FOR DIAGNOSIS. Presented by Dr. BECHET.

M. O., aged 19. The lesions began one and a half years ago on the hands and forearms; within a short time the buttocks and thighs became involved, the trunk remaining clear. Since the appearance of the eruption she had never been free, though at times the disease had been less apparent. She presented for examination brownish red, serpiginous, nævus like lesions on the hands, arms and buttocks, which could not be pressed out with a dioscope. There were no subjective symptoms.

Dr. WISE said that this was a case of livedo reticulata, of which he had observed numerous examples.

Dr. BECHET stated that the lesions had been permanent, the patient stating that they were as prominent in hot as in cold weather and that this point in the history would tend to exclude cutis marmorata, which was only a transient condition.

ERYTHEMA MULTIFORME BULLOSUM. Presented by Dr. BECHET.

Mr. T. B., aged 31 years. The eruption began seven days ago, first appearing on the lower legs, but within a short time spreading to the thighs, trunk, and arms. The eruption attained its maximum severity three days ago, and had since remained stationary. He presented for examination a large number of bullæ on the legs and arms, and a number of papules on the thighs. The eruption was very extensive on the legs, and most of the lesions were bullous.

MANHATTAN DERMATOLOGICAL SOCIETY.

Regular Meetings, February and March, 1914.

DR. SATENSTEIN, *Chairman.*

LICHEN PLANUS UNIVERSALIS ATROPHICUS. Presented by DR. WEISS.

The patient was a male adult, showing a universal lichen planus with atrophic lesions. Umbilication could be seen on the healed, pigmented lesions, forming a depression.

DR. OULMANN said he would call it an umbilicated lichen planus.

DR. PISKO said some of the lesions on the knees and back looked to him like lichen planus of the ordinary type, with little umbilication, which he believed was progressing, the raised border being certainly a sign of progress and not atrophy, and that there was no evidence of atrophy in the case presented.

DR. WEISS said he thought that the umbilication or dell formation was due to to an atrophic condition in the centre of the lesion, but that the consensus of opinion seemed to be that it was due to a raising of the peripheral parts.

BLASTOMYCOSIS. Presented by DR. J. KINGSBURY.

The patient was a healthy appearing male adult, 25 years of age. The affection had been present on the right buttock for over one year. There was an irregular shaped lesion about two inches wide by five inches long, together with various sized papules and warty growths. Clinical diagnosis was confirmed by the laboratory.

DR. McMURTRY said if this patient were going to get large doses of iodide, he would suggest the use of iodopin subcutaneously.

DR. MOUNT said he would suggest the use of potassium iodide internally and tincture of iodine externally.

DR. OULMANN said he thought it might be well to try the X-ray in this case besides the iodides.

ERYTHEMA INDURATUM (BAZIN) COMBINED WITH TUBERCULIDE OF THE FINGERS. Presented by DR. OCHS.

The patient was a female, 16 years of age. The duration of the disease had been only four months. It began on the lower third of both legs as deep-seated nodules, which soon came to the surface and coalesced, forming plaques. On the fingers she had distinct papules, some ulcerating and some scarring from the older ones. At the time of presentation both legs on their lower third showed some deep-seated nodules and some plaques, purplish in color. There was no ulceration present. These plaques were situated on the back and inner side of the leg, not painful except to pressure. On the fingers of both hands were some discrete, sharply defined papules, several of which had undergone ulceration and healed with punctate scars. The glands of the neck were greatly enlarged so that they were visible.

DR. MACKEE said the case was interesting on account of the circinate and serpiginous configuration of the lesions.

HEREDO-SYPHILIS WITH INTERSTITIAL KERATITIS. Presented by DR. OCHS.

The patient was a girl, 12 years of age, who presented lesions of heredo-syphilis with interstitial keratitis of the eye. There was also a perforation in the centre

of the hard palate into the nasal fossa. No very definite history could be obtained from the mother relative to the patient's affection, as she spoke only Italian. The mother had been pregnant fourteen times, had seven miscarriages, three living children and several children dying in early infancy. The exhibitor said he did not think the patient's teeth were of the Hutchinsonian type.

ULCERATION OF THE UVULA. Presented by DR. WEISS.

The patient was a female adult who had acquired lues seven years before and had been treated at various places, receiving from thirty to forty injections of salicylate of mercury, also mixed treatment, according to her own history. She showed extensive ulcerations of the uvula and soft palate. A Wassermann test had been made by the Board of Health, which had been reported as 1 plus. This case will be subjected to salvarsan treatment.

DR. GOTTIEL said he was gradually assuming a position of entire hopelessness as to the possibility of getting a permanently negative Wassermann in any syphilitic infection over six months old, no matter what treatment he employed. The best that he had been able to do was to reduce the intensity of the reaction. The serologists were partly, though unwittingly to blame for this, by continually refining and sensitizing their methods; he had had a number of older cases that had become negative to the ordinary antigens, but they had all remained positive in some degree to the cholesterin antigens. It was about time that the serologists got together and agreed upon some uniform and definite modes of procedure, which could be modified and improved from time to time as required, so that results obtained by different observers could be profitably compared. At the present time each serologist used the method that suited him best; and it may well happen that a test by the ordinary methods may be entirely negative whilst it may be positive to cholesterin or other antigens, in the hands of a more careful or more skilful observer. This meant nothing less than confusion to the practical syphilographer, who in the great majority of cases must send his patient to the serologist for the Wassermann. If we were to continue using and relying on this test, which may possibly be open to doubt, we absolutely must have some uniformity of method to get satisfactorily comparable results.

DR. MOUNT said that he had seen a girl who had had untreated lues for two years, and after treatment the Wassermann reaction after every rest period of ten weeks had been persistently negative. At the beginning it was strongly positive.

DR. MCMURTRY said that the Noguchi test would pick up a lot of positive reactions which were not shown by even the cholesterin antigens.

DR. SATENSTEIN said that, in speaking on the subject, that Dr. Fordyce had told him that if in nine months the patient had not developed a negative Wassermann, the blood reaction probably could not be changed permanently.

PSORIASIS OF THE PENIS. Presented by DR. OCHS.

The patient was a small boy who presented lesions of psoriasis confined mostly to the body of the penis and scrotum. The lesions on the penis were an indistinct whitish scaling, covering almost entirely the glans penis, and extending to the body of the organ in the form of distinct separate areas of slightly reddened lesions, with slight scaling. When these were removed, papillary bleeding was seen. On the scrotum distinct patches with slight scales were seen. The duration of the lesions was about two years. There were also a few psoriatic lesions (mostly of the punctate variety) on the body. The patient had received some treatment, and the speaker said that previously the lesions had been much more marked and characteristic.

LUPUS ERYTHEMATOSUS. Presented by DR. PAROUNAGIAN.

The patient was a male, 31 years old, Hungarian, candy maker by occupation. He gave a history of having had three small sores on the genitals in April, 1911;

he was attended by a physician and no secondary manifestations followed. In August of the same year he married and had a perfectly healthy baby of eight months, living. In October, 1912, a sore appeared on the right side of his face; this was a small papule, but gradually increased in size until it became about the size of a fifty-cent piece, borders elevated, the centre rather rough, uneven and covered with scales, bright red in color and itchy. Shortly another lesion appeared on the lower lip, semi-circular in shape and about the size of a silver quarter, resembling the face lesion. He had been treated by intra-muscular injections of salvarsan, neosalvarsan, mercury, etc., still the lesions remained unchanged. The Wassermann reaction was three plus.

Dr. McMurtry said that it could be possible to have lupus erythematosus co-existent with syphilis in a case like this.

CARCINOMA METASTATICUM LENTICULARE CAPITIS. Presented by
Dr. OULMANN.

The patient, Mrs. M. P., 45 years of age, had had no special disease at any time previously, except neuralgic pains some 10 or 12 years ago. In 1910 she developed a tumor of the breast, which was operated on, as well as the recidive, in 1912. For the past few months she had noticed a great number of hard masses, from lentil to hazelnut size, on her scalp and a smaller number distributed over the body. For weeks she had had extreme headaches and could not sleep. She received X-ray treatments and radium water and at the time of presentation was without headaches, able to sleep, able to eat more, and the tumors had gone down to a fourth of their former size. The lesions were partially red and violaceous and over some of them the skin was normal. They were in the different layers of the skin, but movable on the skull. There was no pain on pressure or any sign of inflammation. Over some of the lesions, the more superficial ones, the hair had fallen out.

Dr. MacKee said it was remarkable to have an epithelioma disappear under a dose of X-ray that was too small to cause epilation and especially where the dose was divided into many treatments over a period of a month. The speaker was inclined to regard the tumors as a relatively benign type of epithelioma and the disappearance of one or two of the lesions was spontaneous.

Dr. McMurtry said in regard to radium that until radium could be tested in establishments like the government institutions of Austria, radium tubes would continue to be doubtful measures for cures, as much of the inactive material was turned out on the market, rented out at high prices and used.

Dr. Oulmann said he believed that the tumors had certainly been partially influenced by the X-ray. The patient also had a tumor in the orbit and the eye specialist who examined her had stated that there was marked improvement at this location, and that the eyeball was not protruding so much as it had done some time previously. The speaker said he had obtained radium water from a spring in Ohio for trial purposes, and that he had received certificates from men who used it, where splendid results were obtained. Dr. Oulmann said the water was weakly fluorescent.

Dr. Weiss said that one year previously, while in Austria, he had visited the mines of Joachimsthal where the main supply of radium comes from. The amount obtained was only five or six grams a year, representing a value of over one million dollars. It was a government monopoly. The larger hospitals were supplied with the element in two, ten, and fifty per cent. strengths, in impermeable containers. They were hired out to patients on physicians' prescriptions.

Dr. Gottheil said that, so far as he could judge, whatever efficacy radium possessed in the cure of carcinoma was due to its irritant and inflammation exciting activities. Its action seemed to be precisely on a par with that of arsenic and other local remedies used for the same purpose; and the only cases of cured

carcinoma that he had seen or had heard of that were beyond cavil epitheliomata, could be cured and were being cured daily by much simpler and cheaper methods. He had neither seen nor heard of indubitably curative results in any of the deeper or glandular cases. It was an act of intellectual and even of public dishonesty to group superficial epitheliomata and rodent ulcers with the deeper carcinomata, and to show curative results in the former cases as evidences of the unique and marvellous effects of radium, when they are recognizedly curable affections, and were real cancers only in name. Yet this was done every day by the radium exploiters and radium peddlers.

DERMATITIS REPENS. Presented by Dr. OCHS, for Dr. HOWARD FOX.

The patient was a female adult who had come under the speaker's observation about six weeks previously. She showed upon the back of one hand a small, somewhat elevated and somewhat eroded ulcer, which quickly spread, until at the time of presentation it involved almost the entire back of the hand. Later both hands were involved, as were also the arms. There was a good deal of pus as the lesions progressed, and Dr. Fox made a diagnosis at first of pyogenic infection. She was given a 5% ichthyol solution, but the exhibitor said he did not see why this should cause such extensive growth of the lesions, as nothing else but oil dressings had since been applied. Small individual miliary abscesses began to appear and a culture was taken to see if it were blastomycosis, which was negative. Dr. Fox presented it as one of dermatitis repens.

Dr. Pisko said that Crocker did not believe that dermatitis repens occurred on both hands. The speaker agreed with the first diagnosis of dermatitis pyogenica in this case.

Dr. Ochs said there were two interesting points in this case. He saw this patient six weeks previously with a small, somewhat circular elevated lesion of the back of the hand, and as there was some pus, ichthyol in a 5% solution was applied. The lesion in spite of this spread and was spreading at the time of presentation, taking in almost the entire back of the hand. Only two weeks previously her hands had been in a very fair condition and had not been stained by ichthyol at all. She then presented on both hands a typical picture of erythema multiforme, and as she had so much pain on the right hand, she was admitted to the Harlem Hospital. Within three days the erythema multiforme disappeared and the hands began to stain.

Dr. OULMANN said that a search should be made for some other mycotic organism besides that of blastomycosis.

PITYRIASIS ROSEA. Presented by Dr. WEISS.

The patient was a male adult, whom the speaker saw for the first time at his clinic only recently. There were lesions on the upper part of his thighs and abdomen, also on the chest and back, of the macular and circinate form, also a so-called herald patch on the right thigh. Some itching was present. The eruption in the third week of its existence faded slightly on the first affected parts, while new lesions were cropping out elsewhere. As maintained by Dr. Weiss some time ago, he looked upon this dermatosis as an erythematous disease of internal origin.

DERMATITIS HERPETIFORMIS. Presented by Dr. MOUNT.

The patient was a male adult, 42 years of age. His affection began the June previous to his presentation, and had been present more or less constantly ever since. There had been slight remissions in the course of the disease, but never was he entirely free from it. The eruption consisted in generalized lesions of a

grouped papulo-vesicular nature, accompanied by intense itching. Dr. Mount said the reason for his bringing him before the Society was that he wished to find out what, in the opinion of the gentlemen present, would alleviate the symptoms.

DR. GOTTHEIL said that though he did not know of any cases of this particular kind that had been treated with auto-serum injections, it should be tried here as in all chronic and recalcitrant dermatoses.

DR. PAROUNAGIAN said he had a similar case which he had presented at this Society which cleared up entirely under absolute milk diet and remained free from lesions, but as soon as he resumed regular diet his lesions reappeared.

DR. MOUNT said that this man did not eat meat, fish or eggs.

DR. GEYSER said that as he had not seen the case he would only call attention to a statement by Dr. Parounagian, concerning a case of his that did well the moment no other food was allowed but milk. This would create the impression perhaps that a milk diet was indicated. The fact was, however, that it was not the milk diet that caused the good effect, but rather the withdrawal of something in the usual diet. It was a well-known fact that a purely milk diet was liable to create more indican than all other single diets. The giving of milk therefore in these cases of dermatitis herpetiformis had nothing to do with the good results following its administration.

PYODERMIA. Presented by DR. PAROUNAGIAN.

The patient was a male adult, who was presented at this Society by Dr. Gottheil in December and who also had been under Dr. MacKee's care. Prior to the treatment the patient had numerous pustular lesions with unusual scarring on the face, chest and back. He was treated with various applications like sulphur paste, etc., without any beneficial effect.

The patient was presented to show the improvement obtained from about ten injections of autogenous vaccines of *acne bacillus*, 500 million to the dose of one cc. each, administered about every third day.

CASE FOR DIAGNOSIS. Presented by DR. BECHET.

The patient, J. C., aged 20, stated that her present trouble began five years previously on her left cheek in front of the ear. Another similar lesion appeared beneath the left eye four years later. Both lesions slowly increased in size. When first seen, six months previously, she presented for examination a large, deeply indurated, crusted lesion, several inches in diameter, situated on the left cheek in front of the ear. It was greatly scarred from previous cauterization two years before. The lesion beneath the eye was a similar one, but much smaller. The subcutaneous tissue for some distance beyond the diseased skin had a hard, board-like feel, this peculiar hardness having disappeared almost entirely from the larger lesion. The smaller one had not changed its appearance from the time it was first observed.

DR. GEORGE HENRY FOX said he would not care to make a positive diagnosis in this case, but that it looked like a case of Darier's sarcoid.

DR. MACKEE thought that the condition might well be a sarcoid. The atrophic plaques with deep-seated nodules and deep infiltration, together with the location and history, were indicative of such a diagnosis. The speaker thought that the redness and scaliness were due to local applications.

DR. WISE said he would like to ask Dr. Bechet to perform a von Pirquet reaction and report the result of it at the next meeting of the Society.

DR. PAROUNAGIAN favored the von Pirquet test as he strongly suspected a tuberculous element in the lesions.

DISSEMINATED TINEA TONSURANS TREATED WITH THE X-RAY.

Presented by Drs. MacKEE and WISE.

The patient, a female child, 6 years of age, was from Dr. Fordyce's clinic. When the patient came under observation the first week of January, 1914, there were numerous scaly, dime-sized patches scattered over the scalp. The lesions contained broken-off hairs. The microscopical examination showed a large-spored type of ringworm.

The scalp was then treated with the X-ray according to the Kienböck-Adamson method, which consisted, the speaker said, of dividing the scalp into five areas and applying a dose of 4 Holzknacht units of a Benoist No. 8 or 9 ray to each area. This, of course, necessitated five treatments which, however, were given at one sitting. On account of the convexity of the scalp, together with the known laws relative to the intensity of the ray being in inverse proportion to the square of the distance, and the lessened intensity of the oblique rays, it was not necessary to protect one area while another was being treated, as the overlapping of the rays was an important factor in the treatment. It usually required about five or six minutes to treat each area.

In this patient, as was the rule, the hair fell out at the end of three weeks. When presented to the Society the scalp was entirely free of hair. The speaker said there was no erythema nor had there been any, so that the hair would grow in again with absolute certainty. The hair usually began to grow at the end of about two months—occasionally in one month—and at times not until the lapse of from three to six months.

Dr. Pisko said he would like to ask Dr. MacKee whether age made any difference in the return of a patient's growth of hair.

Dr. MacKee said that age made no difference excepting that children under three or four years of age were very restless and hard to handle.

ANGIOMA OF THE TONGUE. Presented by Dr. BECHET.

This patient, a little girl of 13, presented for examination an angiomatous tumor about one inch in diameter and greatly elevated, situated on the dorsum of the tongue, to the left of its median line.

SARCOMA CUTIS SPIEGLER. Presented by Dr. OCHS.

This patient, a small boy, had been presented at a number of previous meetings of the Society, and was again presented because of the fact that the glands at the back of his neck had again become very much enlarged, and a new lesion was forming at the left side of the neck. This lesion was purplish in color, slightly elevated, and about the size of a pea. It was not painful, as had been the previous ones.

Dr. MacKee said that he understood that the so-called Spiegler type of sarcoma was a relatively benign neoplasm. The speaker said that about three months ago he saw, at Dr. Fordyce's clinic, a vegetating and ulcerating lesion on the face of a girl about 20 years of age. She was referred to Dr. Fordyce with a diagnosis of tuberculosis. The lesion involved both eyelids and the greater part of the left side of the face. At the clinic the case was regarded as a very severe type of rodent ulcer, but a microscopical examination showed the lesion to be a relatively benign type of sarcoma—perithelioma. The lesion entirely disappeared as a result of one intensive application of the X-ray. With this case in mind, the speaker would advise the same treatment for Dr. Ochs' patient.

Dr. SATENSTEIN said that a case of this kind had been reported in the *Archiv für Dermatologie* of 1912, and that there was a splendid photograph of the case; this lesion had cleared up under very small doses of arsenic.

DR. OCHS said that every time this boy had new lesions in the past they were accompanied with extensive hæmorrhage in the skin, extending down the back. He said this last lesion had occurred without any hæmorrhage of the skin whatsoever. He stated he was now giving the patient two and one-half minims of Fowler's solution of arsenic.

DR. WISE said that if the small amounts of arsenic which the boy had received gave any results at all, he would assume that larger doses would give better results.

PAPULO-CIRCINATE SYPHILIDE. Presented by DR. BECHET.

The patient, a girl aged 7 years, presented for examination a number of moist papules in the anal region and a circinate eruption on the back of the neck. The cervical and inguinal glands were greatly enlarged. The Wassermann reaction was positive. The mother gave a negative reaction. The case occurred in the service of Dr. Kingsbury at the New York Skin and Cancer Hospital.

ERYTHEMA INDURE BAZIN. Presented by DR. OCHS.

This patient, a female child, had been presented before the Society some time previously as a case of lupus erythematosus of both legs. At that time Dr. Wise made a diagnosis of possible sarcoid. Dr. Ochs had sent the case to Dr. MacKee for study as a possible case of sarcoid. Microscopical diagnosis finally proved it to be a case of erythema induratum Bazin.

DR. MACKEE said that, through the kindness of Dr. Ochs, he had had the opportunity of carefully studying the case. There were certain features that were strongly suggestive of the Darier type of sarcoid, namely, the serpiginous outline with a margin composed of deep-seated nodules and an apparently atrophic centre. The nodules, too, were very hard and there had been no ulceration. The color of the overlying skin, instead of being red, as was usual in Bazin's disease, was a purplish or violaceous hue. The histology, however, was so typical of Bazin's disease as to leave practically no doubt regarding the diagnosis. In this connection, however, it should be remembered that the histopathology of the Darier-Roussy type of sarcoid markedly resembled that of erythema induratum.

In reply to a suggestion regarding the use of tuberculin, Dr. MacKee said that both Bazin's disease and the Darier sarcoid gave positive tuberculin reactions and that they both improved under tuberculin therapy. Darier, the speaker said, was of the opinion that his sarcoid was a tuberculide or a very attenuated tuberculosis, while Bazin's disease he considered as a true tuberculosis, benign to be sure, but less so than sarcoid. In reply to an additional question, the speaker said he did not think that the Boeck sarcoid always gave a positive tuberculin and that it did not respond to tuberculin therapy. It usually yielded to arsenic.

DR. OCHS said that this patient had received arsenic, but that it had absolutely no effect on the lesions.

LUES HEREDITARIA TARDA. Presented by DR. OCHS.

The mother of this patient, Miss E., aged 22, had been infected with lues just prior to the birth of the patient. Succeeding her was a child which lived ten days and died of "blood-poisoning." Then the mother had two miscarriages and then a child (which was five years younger than the patient), which was alive and apparently well. As a baby, the patient had "sore eyes" and at the age of 16 red spots appeared on her legs which soon broke down and ulcerated. Since that time she had never been free from ulcerating lesions. She showed, at the time of presentation, on the left leg, four distinct foci of ulceration. These were grouped lesions, two being very large, about the size of a silver dollar and

two smaller ones. On the inner surface of the thigh there was a healed, scarred lesion and several small, new nodules, dark red in color, which were hard to the touch. On the right leg there was one very large ulcer and two smaller ones. These were fairly deep-seated ulcers with undermined edges and a dirty brownish, necrotic purulent base. The patient had had antisyphilitic treatment of mercury and potassium iodide in large doses, but the ulcers did not heal. Mercury and potassium iodide were stopped and she was now being treated with cod liver oil and syrup of hypophosphites, with apparently good results.

Dr. MOUNT said he did not see any reason for calling it latent congenital syphilis because it had none of the stigmata of congenital syphilis.

Dr. MACKEE said that age and sex, together with the fact that the deep-seated nodules were bilateral and symmetrical, and the location on the posterior surfaces of the legs below the knees, would strongly suggest the possibility of Bazin's disease.

Dr. BECHET said he did not see why syphilis and Bazin's disease could not be present in the same patient, and thought that such was probably the case in the patient under discussion.

Dr. PISKO said he disagreed with the diagnosis and did not believe that these lesions were gummata. He said he would rather diagnose it an unusual case of Bazin's disease.

Dr. OCHS said he had brought the case down to see whether any of the members would consider erythema induratum of Bazin in conjunction with lues. The patient had been under treatment by various physicians for six years. Dr. Ochs stopped treatment as soon as the patient came to him.

ACRODERMATITIS CHRONICA ATROPHICANS WITH SCLERODERMA.

Presented by Dr. GOTTHEIL.

Mrs. Anna C., 37, had had her skin affection about eight years, and had been under the observation and care of various dermatologists during that time. The case has been reported at length by Dr. Kingsbury under the same title in the *Jour. Cutan. Dis.*, September, 1907, p. 414, and a detailed description of the lesions may be omitted; they were precisely similar to those then recorded, but further advanced, more extensive and more marked. The general health was unimpaired, and the extremities only were affected. The entire lower limbs, up to the crista ilei, presented the variegated picture of what was formerly called idiopathic atrophy; the skin was dark red, studded irregularly with apparent telangiectases, and markedly thinned and cigarette-paper like, especially over the knees. At the upper margin of the affected area, however, on the upper thigh and buttocks, where, according to the patient's statement, extension of the malady was still taking place, the skin was reddened, thickened, and a distinct inflammatory process was in progress. The most noticeable change, however, from Dr. Kingsbury's description of seven years ago, was the increase in size and number of the sclerodermatous areas. The skin covering the dorsum pedis was markedly sclerodermatous and there were numerous bands and patches of hardened and thickened tissue throughout the skin of the limb. On the other limbs the changes had gone still farther. Sclerodactylia of both hands was very marked, and there were rhagades and ulcerations over most of the phalangeal joints. The back of the right hand was covered with a large sclerodermatous patch; and there were numerous sclerodermatous areas throughout the skin of the limb. On the back of the left hand the process seemed more recent, and was still in the inflammatory and swollen stage; the skin was swollen and dusky red in color, and neither atrophy nor scleroderma was marked.

The case was of interest inasmuch as it had been under observation for so long a time, and with so little advance in the disease in many years. But it was the combination of the dermatitis ending in atrophy of the usual kind in

some areas, and in the development of the scleroderma and sclerodactylia in others, that was of especial moment. Ordinary scleroderma, though it may show symptoms of dermatitis at first, had no such atrophic connotation.

DR. GEORGE HENRY FOX said he had seen many cases in which the two conditions were combined, and would call this case a combination of scleroderma with atrophy.

LUPUS VULGARIS. Presented by DR. BECHET.

A. R., aged 29, stated that her present trouble began nine years ago. She had a very extensive eruption, covering most of the right buttock and consisting of an aggregation of raised, dark red papules and tubercles, most of which united, forming solid areas of eruption. Some scar tissue could be made out, scattered through the mass. Many "apple jelly" nodules could be seen with the dioscope. No other part of the body had been involved.

DERMATITIS HERPETIFORMIS. Presented by Drs. MacKEE AND Mc-MURTRY.

The patient was a female adult, 29 years of age, from Dr. Fordyce's clinic. She was a domestic by occupation. The duration of the affection was twelve years and it was always worse in winter. When presented to the Society there were a few grouped papules and many scratch marks and blood crusts on the upper back, shoulders, buttocks, chest, abdomen and upper arms. There were also a few lesions on the legs and scalp. There was no history of vesiculation. The condition markedly simulated pediculosis corporis.

RINGWORM OF THE NAILS. Presented by Drs. MacKEE AND WISE.

The patient, a female adult, was from Dr. Fordyce's clinic. She was married, a domestic by occupation, and was born in Russia. The duration of the affection was eight years. All but two of the finger nails were affected. The toe nails were not involved. The affected nails were very thin at the distal end and were, at this point, very brittle. This brittleness had resulted in multiple fractures so that the distal extremities were uneven. This was especially noticeable at the sides where there was considerable splintering. The diagnosis had been confirmed by a microscopic examination.

CHRONIC PRURIGINOUS PAPULAR ERUPTION OF THE AXILLÆ: NEURODERMATITIS? LICHEN SIMPLEX CHRONICUS? Presented by Dr. GOTTHEIL.

Mrs. Rose F., aged 22, had had an intensely itchy eruption in the axillæ for two years past; no other part of the body was affected. There were moderately hard, papular, scratched efflorescence, invariably peri-pilar, with some general thickening of the skin but no distinct eczema, in these locations. Sleep was much disturbed; very varied local treatment had been inefficacious. The case was precisely the same as the one presented by Dr. Gottheil in the April, 1912, meeting, as an axillary neurodermatitis, and those previously recorded in the *Jour. Cutan. Dis.* by Dr. G. H. Fox and Dr. J. A. Fordyce, as "Chronic Itchy Papular Eruption."

DR. GEORGE HENRY FOX said he had seen four or five cases of this rare disease and that the lesions were mostly limited to the axillæ, although the originally described case also presented some lesions on the vulva.

DR. MOUNT spoke of the nomenclature of this disease which Brocq called neurodermatitis and Vidal lichen simplex chronicus. Here, in America, it was usually called lichenified eczema. Brocq stated that the first symptom to appear was the itching, and as a result of scratching the patch would follow. Brocq

distinctly stated that this was a neurotic disturbance and that the itching caused scratching and the lesion followed.

Dr. Weiss said that he thought the itching in this case was brought about by the minute papules which he had felt to be present in the skin of this patient, presenting a mild form of prurigo which was probably identical with the disease called lichen chronicus simplex.

CHRONIC PAPULAR ERYTHEMA MULTIFORME. Presented by Dr. WISE.

The patient was a male adult who had had no special history bearing on his disease. He presented a papular chronic erythema of two years' duration. The lesions were lentil to split-pea-sized macules and papules, situated on the chest, back and shoulders. The color was bright red to rose-colored. They resembled a chronic urticaria, but there was very little pruritus. The ordinary forms of treatment seemed to have made no impression upon the dermatosis. The speaker said that it was his intention to treat the patient with injections of his own serum, the results of which procedure will be reported to the Society at a future meeting.

MACULAR AND PAPULO-SQUAMOUS, SECONDARY SYPHILODERM.

Presented by Dr. Ochs.

This patient, a male adult, came to the Harlem Hospital Dispensary three weeks previously, presenting an initial lesion and a macular and papulo-squamous syphiloderm. He was entirely covered from head to foot, even the soles of his feet being involved. Dr. Ochs thought the condition might have been a syphiloderm, possibly combined with seborrhœal eczema, as there was a great deal of itching.

LICHEN PLANUS. Presented by Dr. BECHET.

The patient, an adult male, presented for examination on the extensor surfaces of the wrists and lower forearms a number of large, raised, polygonal papules of a violaceous color. The trunk had always been free. On the lower legs there were a number of scattered papules, similar in appearance to those on the arms, but on the soles of the feet the lesions consisted of sharply defined, raised papules, of a violet red color, all of which had united, forming areas of serpiginous and circinate lesions, which covered a considerable part of the sole, and markedly simulated lues. It was for this reason that the case was shown.

LICHEN PLANUS VERRUCOSUS. Presented by Dr. BECHET.

The patient, a male adult, presented for examination an eruption confined to the lower legs only; the rest of the body had always been free. The eruption had been present for three months and consisted of large, raised, dark-red, brownish or purplish colored lesions with rounded bases and rough wartlike surfaces. One of the lesions was fully an inch in diameter. The lesions had begun as small indurated papules, and had slowly assumed the appearance they maintained at the time of examination.

MEATAL AND SCROTAL CHANCER. Presented by Dr. PAROUNAGIAN.

The patient was a male, 34 years old, waiter by occupation. He presented a well defined chancre on the lateral surface of the scrotum about the size of a silver quarter; it was indurated and sharply circumscribed. A few days after he was first seen, another lesion appeared at the meatus which was ulcerated and discharging sero-pus. Spirochætae were found; the duration, according to the patient's statement, was about four weeks. A slight roseola was present.

REVIEW
OF
DERMATOLOGY AND SYPHILIS.

Under the direction of

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GAZETTE DES HÔPITAUX.

(Jan. 31, 1914, No. 13.)

Abstracted by PAUL E. BECHET, M.D.

THE ACTION OF THE IODIZED FATTY ETHERS IN SYPHILIS. GERBAY,
p. 202.

Gerbay deprecates the present tendency of neglecting the iodine treatment in syphilis. He dilates on the various disadvantages of iodide of potassium, and proposes as a substitute for it iodine compounds, derived from the fatty acids, particularly the ethylic ether of diiodobrassicidic acid. This substance is fusible at 37° C., its iodine content is 41.06. It does not decompose in the intestinal tract, its absorption is slow, iodine being found in the urine only during the second or third hour after ingestion. Its elimination is also slow, 5% of the amount ingested being eliminated after five hours, 50% after twenty-hour hours, 85% after one hundred hours. Elimination is complete after one hundred and twenty hours. He reports very good results with this substance in a series of cases, many of which had not been able to tolerate iodide of potassium. No cases developed an idiosyncrasy toward the new substance.

(*Ibidem*, Feb. 10, 1914, No. 17.)

INFECTION OF THE SCALP WITH PEDICULI PUBIS. BRAULT and
MONTPELLIER, p. 261.

Brault and Montpellier report two cases of infection of the scalp with pediculi pubis. The patients were male adults.

ANNALES DES MALADIES VÉNÉRIENNES.

(April, 1913, viii, No. 4.)

Abstracted by FAXTON E. GARDNER, M.D.

SYPHILIS OF THE BLADDER. LEVY-BING and DURVEUX, p. 241.

Syphilitic lesions of the bladder seem rare, but occur during the secondary and tertiary periods. There is no case of chancre of the bladder. The symptoms are not characteristic and are those of any vesical inflammation. As seen through the cystoscope, secondary lesions are of the exanthem type (localized or generalized) or ulcerative, similar to mucous patches. Tertiary lesions are either ulcerations or papillomatous vegetations. Antisyphilitic treatment quickly causes all these lesions to disappear.

SEROLOGIC STUDY OF PROFETA'S LAW. BERTHA SABIN, p. 263.

In most cases the Wassermann reaction is positive, both in the mother and child at birth; the latter, though seemingly healthy, must be considered as syphilitic. The alleged immunity is simply a latent infection. The reaction may be negative at birth and become positive later.

But if a child remains with a negative reaction beyond the first year, he must be considered healthy. Syphilis in the mother is of far greater importance, insofar as the child is concerned, than syphilis in the father.

All children born with a positive Wassermann can be nursed by the mother. But when the reaction is negative, artificial feeding must be resorted to. A wet nurse cannot be secured, because there is no certainty that the infants are not syphilitic and it is wise to submit them to antisyphilitic treatment.

BELATED HEMIPLEGIA AFTER NEOSALVARSAN INFUSION. DEATH. CARLE, p. 282.

A woman, infected by her husband eight years ago, receives half of 0.9 gm. neosalvarsan, while the husband receives the other half. Nothing occurs in the husband. In the wife, headaches, which already existed previous to the infusion, became much more violent. Five weeks after the injection a right hemiplegia occurred. Mercurial treatment is given for six weeks, with considerable benefit. Following a mental shock, there was a relapse of the headache and a left-sided hemiplegia. Death occurred seven months after the injection.

Carle concludes that neosalvarsan must never be used in patients exhibiting headaches and nervous manifestations.

POSITIVE WASSERMANN REACTION AND SYPHILITIC VARICOSE ULCERS 46 YEARS AFTER THE CHANCRE. MEAUX SAINT-MARC, p. 290.

The patient had been well treated. The positive reaction was obtained with Desmoulières cholesterin antigen, which gives a very sensitive reaction.

SYPHILITIC GUMMATOUS INFILTRATION MISTAKEN FOR A PHLEGMON. MEAUX SAINT-MARC, p. 292.

CHANCRE OF THE NIPPLE. GAUCHER and GIROUX, p. 295.

TABES MADE WORSE BY "606." GAUCHER and GIROUX, p. 297.

The patient received 5 injections, with no improvement whatsoever; on the contrary, disturbances of vision, exacerbation of the painful phenomena and general malaise resulted.

(*Ibidem*, May, 1913, No. 5.)

CHRONIC FIBROUS ABSCESES CAUSED BY THE DUCREY BACILLUS. GOUGEROT and MEAUX SAINT-MARC, p. 321.

The authors report three cases in which the lymphangitic abscesses due to a chancre exhibited the insidious and torpid character of cold abscesses. The tendency to sclerosis was very marked. The chancroidal nature was confirmed by bacteriological examination.

MIXED LESIONS OF THE TONGUE. SYPHILIS AND CANCER. CHIFFOLIAN and DUROEUX, p. 333.

The patient had first a number of gummata for which three infusions of 0.45 gr. neosalvarsan were given. The gummata disappeared in a wonderful way, but symptoms of cancer developed very rapidly. It seems as if neosalvarsan had considerably activated the evolution of the cancer.

(*Ibidem*, July, 1913, No. 7.)

ON THE LOCALIZATION OF TERTIARY CUTANEOUS SYPHILIDES. P. THEODORESCO, p. 481.

The author reports two cases of rare localizations of syphilitic ulceration on the external ear.

DIFFICULTIES MET IN THE DIAGNOSIS BETWEEN SYPHILITIC MENINGITIS AND TUBERCULOUS MENINGITIS IN THE ADULT. JOLTRAIN and LÉVY-FRANKEL, p. 512.

Two cases are reported. The first is that of a man in the tertiary stage who had exhibited psychical symptoms during the three months preceding the final meningeal disturbance, which autopsy showed to be purely tuberculous. The second case pertains to a young man who had had several indurated chancres three weeks previously. There was no suspicion of tuberculosis. However, the fatal meningitis was also tuberculous. The presence of the Koch bacillus in the cerebro-spinal fluid is the only positive proof of diagnosis during life.

A CASE OF LYMPHOGRANULOMATOSIS WITH POSITIVE WASSERMANN REACTION. GAUCHER and WEISSENBACH, p. 523.

LYMPHADENOMA OF THE GUMS MISTAKEN FOR A SYPHILIDE. BORY, p. 529.

SYPHILITIC CHANCRE OF THE UTERINE CERVIX. GAUCHER and GIROUX, p. 534.

(*Ibidem*, August, 1913, No. 8.)

DANGER OF SYPHILIS TO SOCIETY AND THE QUESTION OF STATE CONTROL. GAUCHER and GOUGEROT, p. 561.

The authors examine: 1, the dangers in the family; 2, in the daily routine of life; 3, in marriage; 4, in infant nursing; 5, in servants; 6, in hospital patients;

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7, in the workshop; 8, in physicians, midwives and nurses; 9, particularly in prostitutes.

The last is the greatest and its control is the key to the whole problem. The authors attack fiercely the French system of regulation of the social evil, which is inefficient, illegal and cruel for the women and propose its abolition, together with the enactment of laws that would protect young girls and women and make those men who want to enjoy another moral standard than that they require of women, do it under their own responsibility and with their risk of extremely heavy penalties.

ON THE USE OF INTRAMUSCULAR INJECTIONS OF SALVARSAN.

BERTARELLI, p. 602.

Bertarelli prefers intramuscular to intravenous injections, as having a more constant action and less risk than the latter.

MUCOUS PATCHES OF THE MOUTH 33 YEARS AFTER THE CHANCRE. GAUCHER and GIROUX, p. 607.

Late mucous patches are not very rare (1 case in 17 of syphilis, according to Tournier). The case was one of untreated and unknown syphilis and the buccal cleanliness of the patient was very deficient.

SYPHILITIC CHANCRE OF THE TIP OF THE NOSE. GAUCHER and GIROUX, p. 610.

(*Ibidem*, September, 1913, No. 9.)

THE ANTIGEN IN THE WASSERMANN REACTION. PARIS and DESMOULIÈRE, p. 641.

The antigen considered is the DP cholesterin antigen, which the authors consider more reliable than any other, giving 15 or 20% more of positive results.

"606" DOES NOT STERILIZE SYPHILIS. LÉVY-BING, p. 657.

TWO CASES OF SYPHILITIC REINFECTION. GLAVTCHÉ, p. 666.

The first case is one of reinfection, 18 months after the initial chancre, treated with salvarsan and mercury. The second infection was clinically much milder than the first. The second case has been observed only partly by the author, and is more doubtful.

(*Ibidem*, October, 1913, No. 10.)

THE MODERN TREATMENT OF SYPHILIS. NEISSER, p. 721.

This is an extensive review of the subject and a strong plea for the combined salvarsan and mercury treatment.

DIFFUSE CEREBRO-SPINAL SYPHILIS. GAUCHER and GIROUX, p. 766.

One case, improved by mercury and iodide treatment.

(*Ibidem*, November, 1913, No. 11.)

THE SPREADING OF THE MEDIAN UPPER INCISOR TEETH AS AN HEREDO-SYPHILITIC DYSTROPHY. GAUCHER, p. 801.

This malformation is considered as typically syphilitic by the author, who reports several cases in which the diagnosis was made solely on its presence and later confirmed by other syphilitic symptoms or a positive Wassermann reaction; which, as Gaucher avers, is almost constantly the case.

A CASE OF HYPERESTHESIA AND GUSTATORY PERVERSION OF SPECIFIC ORIGIN. RENAULT, p. 824.

A case of burning sensations in the mouth with salivation, in an old syphilitic, and cured by mercurial treatment. This case proves that syphilis must always be thought of as a possible ætiology of all phenomena apparently not accounted for by evident lesions.

A THIRD CASE OF RAYNAUD'S DISEASE OF SYPHILITIC ORIGIN. GAUCHIER, GIROUX and MEYNET, p. 828.

The authors consider syphilis as the only well established factor of Raynaud's disease. In the case here reported, the Wassermann reaction was completely positive and there existed also a marked aortic lesion.

A CASE OF CONGENITAL SYPHILIS WITH MULTIPLE AND SEVERE LESIONS. BLOCH and ONTONELLI, p. 835.

(*Ibidem*, December, 1913, No. 12.)

RAYNAUD'S DISEASE AND SYPHILIS. GIROUX, p. 882.

Syphilis is one of the most important causes of Raynaud's disease. Both conditions coexist frequently; the Wassermann reaction is often positive in Raynaud's disease. Tabes and paroxysmal hæmoglobinuria are often associated. Mercurial and iodide treatment is sometimes efficient in Raynaud's disease. Forty-two observations are collected. The article is a very complete, general review.

CUTANEOUS HORN OF THE SCROTUM. BOBBIE, p. 941.

One case. Surgical removal.

ABOUT THE STERILIZATION OF SYPHILIS. JOLTRAIN, p. 946.

Joltrain is skeptical about the sterilization of syphilis. He reports three cases in which this result was apparently obtained, in which the Wassermann reaction remained negative for a long time, but in which the later evolution showed that the process was not extinct.

AMERICAN JOURNAL OF THE MEDICAL SCIENCES.

(May, 1914, cxlvii, No. 5.)

Abstracted by R. C. JAMIESON, M.D.

PRIMARY TISSUE LESIONS IN THE HEART PRODUCED BY SPIROCHÆTA PALLIDA. A. S. WARTHEIN.

This article describes at length the pathological changes produced in the heart by syphilis, parenchymatous changes consisting of (1) localization of spirochætæ in the myocardium, without recognizable tissue change, (2) pale degeneration of the heart muscle in association with the spirochætæ pallida, (3) fatty degeneration, (4) simple atrophy, (5) necrosis; and interstitial changes of œdema, interstitial proliferation and myxoma-like areas.

These changes may occur independently of each other, but if there are marked interstitial changes there is likely to be pronounced parenchymatous change, while the converse does not hold good. Interstitial changes are more likely to occur in mild and old infections, the parenchymatous changes in virulent, congenital and active secondary and early tertiary syphilis.

He found the spirochætæ pallida in great numbers in the heart muscle when there were none elsewhere, and considers that the spirochætæ pallida is the most important ætiological factor in the production of myocardial and endocardial disease.

ARCHIVES OF INTERNAL MEDICINE.

(April, 1914, xiii, No. 4.)

Abstracted by R. C. JAMIESON, M.D.

SYSTEMIC BLASTOMYCOSIS. A. M. STÖBER, p. 509.

This article is the result of a lengthy research into the subject of blastomycosis, bringing the pathological, bacteriological and clinical knowledge to the highest point possible at the present time.

He gives an excellent description of the organism with its bacteriological and cultural characteristics. He found that animals were markedly resistant to blastomycotic infection and thinks that human resistance must be lowered, for infection to occur. He was also unable to find any cases of infection among those caring for blastomycotic cases.

In his investigation of home conditions, he found that in many cases the disease began during the months of greatest dampness and mold growth, suggesting that the blastomycetes have their habitat in insanitary places. Molds grown from decaying material taken from these places were similar in many respects to blastomycetes. Infection in systemic cases seems to be through the respiratory tract; in cutaneous blastomycosis, through some trauma.

He gives a complete pathological report with Roentgen examination of the bones, and differentiates clinically blastomycosis from coccidioidal granuloma, epithelioma, tuberculosis and syphilis. He states that the mortality is at present 90%.

Prophylaxis is indicated as preventive treatment and general hygienic measures as well as potassium iodide, which seems to have the most effect. Symptomatic treatment with X-rays for the treatment of cutaneous lesions is also indicated.

Vaccine therapy was used with encouraging results, the filtrate and suspension of the triturated membranes of bouillon cultures, grown at room temperature for two to six months. Rise of temperature, malaise and localized pain followed the injection, to be succeeded by general improvement. His experience would suggest that old blastomycotic cultures may be useful for diagnostic and therapeutic purposes.

A CASE OF SYSTEMIC BLASTOMYCOSIS. R. A. KROST, A. M. STÖBER, M. J. MOES, p. 557.

A CASE OF SYSTEMIC BLASTOMYCOSIS. M. LEWISON, H. JACKSON, p. 575.

A CASE OF SYSTEMIC BLASTOMYCOSIS. H. J. MYERS, A. M. STÖBER, p. 585.

A CASE OF SYSTEMIC BLASTOMYCOSIS WITH RECOVERY. T. H. BOUGHTON, A. M. STÖBER, p. 599.

A CASE OF SYSTEMIC BLASTOMYCOSIS. H. JACKSON, p. 607.

A CASE OF SYSTEMIC BLASTOMYCOSIS WITH NECROPSY. R. E. BECHTEL, E. R. LECOUNT, p. 609.

A CASE OF SYSTEMIC BLASTOMYCOSIS. J. S. EISENTAEDT, T. H. BOUGHTON, p. 617.

A CASE OF SYSTEMIC BLASTOMYCOSIS. P. F. SHAFFNER, p. 621.

A CASE OF SYSTEMIC BLASTOMYCOSIS. T. CHURCHILL, A. M. STOVER, p. 568.

A CASE OF BLASTOMYCOSIS. T. H. BOUGHTON, S. N. CLARK, p. 594.

A CASE OF SYSTEMIC BLASTOMYCOSIS. F. B. RILEY, E. R. LECOUNT, p. 614.

The above articles are all detailed reports of the cases mentioned in the first article by A. M. Stober on systemic blastomycosis.

(*Ibidem*, May, 1914, xiii, No. 5.)

A METHOD DEVELOPED FOR OBTAINING A STANDARD WASSERMANN ANTIGEN. C. W. FIELD, p. 790.

Field's work was done at the Bellevue Hospital Pathological Department and his antigen is obtained as follows: 300 grams of guinea pig heart is finely ground, extracted for fourteen days at 37° C. with 3000 cc. of absolute alcohol, chemically pure, filtered, and to half the filtrate is added excess of cholesterol. This is incubated over night, put in a constant temperature bath at 16° C. for three hours, filtered and added to an equal amount of filtered alcoholic extract; 20 cc. are evaporated to dryness and desiccated for twenty-four hours over sulphuric acid and then weighed.

Five different lots with varying dilutions were used, with very constant results. With this antigen the patient's serum must be inactivated.

BULLETIN OF THE JOHNS HOPKINS HOSPITAL.

(May, 1914, xxv, No. 279.)

Abstracted by R. C. JAMIESON, M.D.

THE COLLOIDAL GOLD REACTION IN THE CEREBROSPINAL FLUID. S. R. MILLER and R. L. LEVY, p. 133.

This article is a very thorough exposition of the subject, giving the technique in minute details, apparatus required, preparation of ingredients, solutions required, etc., and also a complete tabulation and résumé of results.

They do not claim that this is a test for general use, but it can be performed rapidly and with small amounts of spinal fluid, normal fluids giving a negative reaction. With regard to congenital, secondary and tertiary syphilis, it is no better than other methods and is rather inconstant in its results; and in tabes and cerebrospinal syphilis it gives no characteristic results. However, in paresis they feel that the reaction is "sufficiently constant to warrant its use as an aid in the differentiation of this condition from others."

BRITISH JOURNAL OF DERMATOLOGY.

(August, 1913, xxv, No. 8.)

Abstracted by FRANK CROZER KNOWLES, M.D.

A METHOD OF STANDARDISING THE TINTS GIVEN BY THE SA-BOURAUD-NOIRE PASTILLE. DUDLEY CORBETT, p. 249.

The writer has made a careful and scientific study of the pastilles and has found a considerable variation in tint, particularly in regard to the color re-

action to the rays. The standard used in a considerable number of instances was too dark. A hard type of radiation causes a more rapid change than that of a softer quality, the medium tube giving the best results. To obtain the accurate standard, the composition of the color changes has been carefully studied by means of a Lovibond's tintometer. Corbett is trying to perfect a radiometer that will be accurate both for the fractional and full dose methods.

A CASE OF PURPURA FOLLOWING TRAUMA. W. JENKINS OLIVER, p. 253.

After an injury to the left knee, a patient, male, aged twenty years, developed, six hours later, a typical purpura of the left leg and the ankle, accompanied by swelling.

(*Ibidem*, September, 1913, xxv, No. 9.)

HEREDITARY DUPUYTREN'S CONTRACTURE. J. L. BUNCH, p. 279.

The writer records the history of a family, the male members of which are said to have been affected with Dupuytren's contraction for the past three hundred years. The affection has attacked only the male line. The father, son and grandson have been under Dr. Bunch's care. The disease starts, in each individual, at about the same age, reaches its height at the same period of life, and it attacks the same fingers of both hands.

(*Ibidem*, October, 1913, xxv, No. 10.)

THE VACCINE TREATMENT OF SKIN DISEASES. ARTHUR WHITFIELD, p. 307.

Whitfield originally made careful opsonic estimations in every case treated in this way following the lead of Wright. It is very commonly found, that in a patient in the stage of healing of one virulent boil, while at the same moment he is just beginning to develop one or more fresh lesions in previously healthy parts, will usually show a high index. Therefore Whitfield has come to the conclusion that the opsonic index is erroneous where it is unaccompanied by careful clinical observations. He finds the index, therefore, of chief use in the mixed infections, where it is important to determine which is the pathological factor.

Two theories have been cited in regard to the method of action of vaccines; first, by causing an inflammatory action in the diseased area; and second, that the general immunity of the body is raised, and the infection is combated. Vaccines probably have both of these actions.

Whitfield considers that all cases of furunculosis can be cured by vaccine treatment, if a sufficient course and proper dosage are given, and vaccine is directly prepared from the lesions. The exception being the recurrent furunculosis of the nape of the neck. He uses an initial dose of 250,000,000, and raises it rapidly. If the boils have appeared about two weeks apart, he continues the treatment for three months; when at intervals of two or three months, the injections are given for twice that period. When the furuncles appear in certain seasons each year, it is well to protect the patient over that period by previously administered injections.

The impetigo of Bockhart has yielded uniformly good results, while the response in sycosis to this method has been rather disappointing. Even in the worst cases of sycosis vulgaris a first injection causes rapid improvement, the pustules unfortunately, however, begin to reappear at the end of a week or longer, and subsequent injections are not as efficacious as the first. Whitfield finds that chronic, pyogenic eczematoid dermatitis also proves disappointing in its response to vaccines, betterment being observed only in the beginning of the treatment. The early cases of sycosis and this eczematoid dermatitis can be cured by vaccines

plus appropriate local treatment. In rare instances, impetigo contagiosa does not yield to local measures; in these, a few staphylococcic injections or even one, will prove curative.

In severe cases of erysipelas, streptococcic vaccine, preferable autogenous, is recommended; 5,000,000 organisms being given, and a second or third injection, if necessary, at intervals of five days. The chronic (mixed) superficial infection (streptococcic dermatitis of Sabouraud), and chronic relapsing lymphangitis have not responded favorably to vaccine injections. Whitfield concludes that the vaccine treatment of acne is useful as an adjunct to other measures, a great number of cases not responding to the injections alone.

The writer has tried tuberculin R, new tuberculin, bacillary emulsion, and so-called old tuberculin; the last having proved most efficient. Steep rises in the dose are given as soon as a local response in the lesion is not observed. The dose is usually doubled in the early part of the treatment. Some favorable results have been obtained in the treatment of lupus vulgaris by this method. The same procedure has been used with considerable success in tuberculous ulcers and Bazin's disease.

Staphylococcic and streptococcic injections have been given in leg ulcer without success. Different authors have claimed that pruritus ani is caused by a streptococcus or the *Bacillus coli*; vaccines containing these organisms have proven a failure. Vaccine treatment has also been tried by Whitfield in ringworm of the scalp; massive cultures of the common microsporon have been grown on broth and the injection prepared from this. Reaction of the lesion was produced but cure was not affected.

THE TREATMENT OF SYPHILIS WITH SALVARSAN. J. W. GIBBARD and L. W. HARRISON, p. 318.

The writers have studied the subject from three points of view; first, the most efficient treatment of syphilis with the least expenditure of the remedy; second, whether salvarsan alone or combined with mercurial treatment has any advantage over the exclusive use of mercury; and third, as to the safety of its administration.

Seven methods have been carried out to ascertain the most efficient and economical method of treating syphilis with salvarsan. The patients have been examined monthly for clinical signs and the Wassermann test was made every three months. The intramuscular and subcutaneous injections were soon discarded because of the frequent production of indurated masses and sloughs at the site of injection and the high proportion of relapses. The intravenous injections of 0.3 gm. of salvarsan was also abandoned because the relapses showed conclusively that the dosage was insufficient.

It was found that the most successful treatment consisted in the administration of two salvarsan and nine mercurial injections; but five per cent. of relapses were clinically observed, and only eighteen per cent. of positive Wassermann reactions were discovered after the lapse of one year.

The writers believe that their present method of treatment by means of three intravenous injections of 0.6 gm. of salvarsan and ten intramuscular injections of mercurial cream in a period of ten to twelve weeks, will prove the most successful procedure of all. The latter method however has not been used a sufficient length of time to prove conclusively that it is the best so far tried. Of ninety-one cases treated from December, 1912, to April, 1913, with five weekly injections of 0.6 gm. of salvarsan and ten weekly injections of mercury, none has so far relapsed clinically or given a positive Wassermann reaction.

The investigators have found that fewer relapses have occurred when the treatment was started in the primary stage or the early part of the secondary period, than later in the disease. A comparison was made with the results obtained with

salvarsan and exclusively mercurial treatment. It was found that there was a very marked reduction in the number of clinical relapses and positive Wassermann tests shown by the salvarsan, as compared with the exclusive mercurial cases, and there was also a great reduction in the average number of days lost away from duty.

Gibbard and Harrison have been fortunate in having no fatalities in over 2,500 intravenous injections.

The fatalities which have been reported are divided into three classes:

1. Those which could have been avoided by attention to well-known contraindications and by careful technique and after-treatment.

2. Deaths due to pulmonary embolism.

3. Those in which a series of epileptiform convulsions followed by death have occurred on the third to the fifth day after the injection; the explanation of the last named is still in dispute.

There are two explanations of the fatalities in the third class. One is that they are due to an exacerbation of cerebral syphilis, a Jarisch-Herxheimer reaction in the central nervous system; and the other that they are due to salvarsan poisoning. There is a considerable difference of opinion in regard to the reason for the febrile reaction, vomiting, diarrhœa, and other unpleasant symptoms which follow immediately after intravenous injections of salvarsan. Great precautions were taken in the intravenous injections to have freshly distilled water, freshly prepared salt solution, and the solutions at blood-heat, but notwithstanding every precaution, a considerable proportion of the cases showed reaction; usually very slight.

Forty-five out of 976 patients had a temperature over 102° F. and fourteen of these reached 103° F. or over; vomiting and diarrhœa were either slightly present or entirely absent. The latter two symptoms depended upon the size of the dose, while it has very little influence on the febrile reaction. Diarrhœa and vomiting are due, apparently, to the toxic action of salvarsan, while the fever is probably caused by spirochæte endotoxins. Certain individuals show a much greater susceptibility to salvarsan than do others.

The writers believe the cranial nerve disturbances following salvarsan injections are, in most instances, due to syphilis and not to the remedy.

(*Ibidem*, November, 1913, xxv, No. 11.)

A CASE OF XANTHOMA TUBEROSUM MULTIPLEX ASSOCIATED WITH TUMORS ABOUT THE JOINTS. J. M. H. MacLEOD, p. 344.

Dr. MacLeod presented a paper on a remarkable case of this affection, developing in a male of twenty years. The face was covered with telangiectases. Xanthomatous nodules and plaques were observed on the eyelids, the sides of the nose, the cheeks, the neck, in the axillæ, on the abdomen, beneath the nipples, the back, the hips, the sacrum, surrounding the anus and the flexure aspect of both elbows. The nodules and plaques were minute or quite large. The sheets of xanthoma in the neighborhood of the joints were of a leathery consistency, fissured, and there was a papillomatous tendency with secondary pus infection. The disease was noticeably absent from the extensor surface of the elbows and the knees and the hands. The mucous membranes were unattacked.

The wrists, the elbows and the knees became irregularly swollen and deformed synchronously with the development of the skin eruption. A hard, cartilaginous mass developed on the front of the right wrist which interfered with motion, and there was erosion of the bone. Similar smaller growths attacked the other joints. There was no organic derangement.

The fibro-fatty masses consisted of a coarse net-work of fibrous tissue, dilated capillaries and groups of cells. Numerous typical xanthoma cells were present, showing a central round or oval nucleus and containing granules of fat. Large

cells were observed, which contained two to three dozen nuclei, arranged in an irregular or a perfect ring at the periphery, enclosing numerous fat-granules, "xanthoma giant-cells." The pilo-sebaceous follicles were absent in the affected areas. Fatty granules were a noticeable feature. The writer, because of the microscopical examination, came to the same conclusions as have been elaborated by Pollitzer and Wile (*Jour. Cutan. Dis.*, 1912, p. 235).

MULTIPLE IDIOPATHIC PIGMENTED SARCOMA (SO-CALLED) OF KAPOSÍ. J. H. SEQUEIRA, p. 351.

Four cases of the affection are reported by the writer; the first, a male aged forty-six years; the second, a male aged sixty-five years; the third, a male of seventy-eight years; and the fourth, a male of eighty-four years.

The first case had lasted for two years when first observed; the second, for five years; the third, for over a year; and in the fourth, the duration was not mentioned.

The first case involved the left foot, the right foot, the left hand and the wrist; the second, the feet and the lower legs; the third, both feet and the lower legs, the right forearm and the wrist; and the fourth, both lower legs, the feet, and the right thigh.

Microscopical studies were made in the first three cases. The first case exhibited the greatest change in the papillary portion of the derma. The capillaries were increased in number and size; a large number of mononuclear cells with basophilic protoplasm resembling endothelial cells, and also spindle-cells were found in the vicinity of the blood vessels. There were no plasma cells and no pigment in the derma. The second case showed a cellular mass, consisting of ovoid or rounded cells, probably endothelial cells, under the thinned epidermis. The cells showed a tendency to form concentric layers suggesting an endothelioma. The third case showed numerous engorged capillaries and perivascular infiltrations. There was an abundant cellular stroma and groups of plasma cells around the blood vessels. The large amount of cellular and intercellular pigment gave the reaction to iron.

The writer considers the deposit of pigment is merely a secondary phenomenon due to hæmorrhages from the engorged capillaries, and therefore is absent in the early stage of the affection.

(*Ibidem*, December, 1913, xxv, No. 12.)

TINEA IMBRICATA (TOKELAU). ALDO CASTELLANI, p. 377.

The term "tinea imbricata" is used to denote a tropical dermatomycosis, or, more correctly, a group of dermatomycoses, due to the fungi of the genus *endodermophyton*, and clinically characterised by the presence of extensive, flaky, scaly patches; the scale being large, tissue-paper-like, firmly adherent by their bases and arranged in concentric rings or parallel lines.

Numerous synonyms have been used for the affection; (a) from the name of the centres where the disease is rife; (b) from the name of the patient who first introduced the disease in certain countries; (c) from certain clinical appearances; (d) from the generic name given to the fungus; (e) from the name of the authors who have more completely studied the disease; and (f) terms apparently of unknown origin.

Castellani, by using a special technique, has succeeded in growing the true fungi causing the disease, as proved by the fact that by inoculating pure cultures of the organism the typical disease has been reproduced in human beings. He considers that these organisms should be classed as the genus *endodermophyton*. There are several species of these organisms; he has grown two. The term *endodermophyton concentricum* has been applied to the one, and *endodermophyton indicum* to the other.

The fungi belonging to this genus are characterized by their growing between the superficial and the deep strata of the epidermis, forming an interlacing felt of mycelia, which detaches the horny and the granular layers from the rete malphigii. They do not invade the hair follicles or cause suppuration. Botanically they are closely allied to the Achorions.

Attempts at cultivation failed for a long time, as the fungi do not grow generally on solid media direct from the scales. The fungi are first treated with alcohol for from five to ten minutes, and then must be placed in glucose broth-tubes, one scale in each tube. It takes from three to four weeks for the appearance of a small, white, fluffy mass with a dark spot (the scale) in the centre. Portions of the broth cultures are sown on solid sugar media on which the growth now takes place quite easily. Fungi can then be indefinitely subcultured on solid media. The fungi grow much more abundantly on glucose agar, four per cent., than on Sabouraud or any other media. The writer carefully studied the method of reproduction, pleomorphism, and differentiated the two species, microscopically and culturally.

The disease has been found usually in young adults, rarely in infants or children, and exceptionally in old individuals. Men are more frequently attacked. Those in small villages or country districts are prone to an outbreak.

The eruption begins with one or several small, round or oval, slightly raised, dark-brown patches, which are very itchy. Soon the central portion of each patch splits, and a ring of flaky, large scales, attached to the periphery is formed. This scaly ring extends peripherally. Large areas are thus covered by this peripheral ring progression and the joining of rings from other patches. If the scales are removed, rings of concentric, circular, dark lines remain visible, one-quarter to one-half inch apart. The number of rings forming the patch varies from eight to ten. Any portion of the body may be attacked excepting the scalp. The nails may be affected and become thickened, with a rough surface and deep cracks, and scrapings show the fungus. The health is not affected, but pruritus is intense, particularly in the hot season and if on a certain diet, such as dry fish. There may be an eosinophilia, varying from six to sixteen per cent., particularly in long standing cases. There may be an associated diffuse type rather than a concentric formation but the scales are typical. The lesions caused by the endodermophyton indicum may be a little more superficial and the scales not situated so close together.

The disease is readily reproduced in human beings by inoculating scales (Manson) or with pure cultures of the fungi (Castellani). The incubation period by the former method is 8 to 10 days, by the latter, 12 to 20 days.

The disease tends to remain permanently and cure is difficult. The routine treatment employed by Castellani consists of one to two drams of resorcin to the ounce of tincture of benzoin. It is applied once or twice daily, freely, to the affected parts. Where the outbreak is generalized, half of the body is painted one day, the other half the next, and so on alternately. The treatment must be continued for several weeks. In addition, once or twice each week, the patient is given a very hot bath, and may be scrubbed all over with sandsoap. Chrysarobin ointment (5 to 10%) and iodine liniment have also been used with benefit.

The article makes a complete symposium on the subject and contains several beautiful color and black and white photographs.

(*Ibidem*, February, 1914, xxvi, No. 2.)

EPIDERMOLYSIS BULLOSA HEREDITARIA. E. B. MORLEY, p. 35.

Morley reports three cases of epidermolysis bullosa hereditaria, in a family whose family-tree shows 22 recognized cases in five generations out of 62 individuals.

MORBILIFORM NÆVUS WITH HEMIHYPERTROPHY. E. WARD, p. 43.

Ward reports what seems to be a unique case of a measles-like mottling of considerable extent, associated with hemihypertrophy and defective dentition, with early decay of all the teeth.

PROTEIN METABOLISM IN DISEASES OF THE SKIN. H. LETHEBY TIDY, p. 45.

This author is of the opinion that the results obtained by Dr. Schamberg and his collaborators regarding the retention of nitrogen found in psoriasis is not peculiar to that condition; that the observed retention of nitrogen is apparent, and not real, and is accounted for by the loss from the affected skin; and that there is no evidence of retention of nitrogen in psoriasis, after the disappearance of the eruption.

Possibly a low diet, combined with the application of chrysarobin, may be found to be the ideal treatment.

JOURNAL OF THE MISSOURI STATE MEDICAL ASSOCIATION.

(December, 1913, x, No. 6.)

Abstracted by CHARLES T. SHARPE, M.D.

THE CLASSIFICATION OF THE CHRONIC^{*} RESISTANT MACULAR AND MACULOPAPULAR SCALY ERYTHRODERMIAS. RICHARD L. SUTTON, p. 191.

Sutton describes two cases, one of which he believes to be xantho-erythrodermia perstans, and the other psoriasis lichenoides. A clinical and histopathological description with photographs are given.

In discussing the classification he offers these conclusions: "There are certain cutaneous disorders which combine in greater or lesser degree the clinical characteristics of seborrhæic dermatitis, psoriasis and lichen planus. For the sake of brevity, it would be well to class all of these conditions under the general heading of the chronic resistant macular and maculopapular scaly erythrodermias. From a strictly scientific viewpoint, however, it is probably best to separate the various conditions with groups, placing in each group only those disorders which have a close clinical and histopathological resemblance to each other.

"At the bottom of the list may be placed Crocker's xantho-erythrodermia perstans, and at the top, the parakeratosis variegata of Unna, Santi and Pollitzer, with Brocq's para-psoriasis group, and psoriasis lichenoides, in which is included Neisser's lichenoid eruptions, Jadassohn's psoriasiform dermatitis, Juliusberg's pityriasis lichenoides chronica and the condition exemplified in Case 2, intervening.

"While this arrangement may be open to criticism, in view of the fact that our knowledge of several, in fact of all the conditions is more or less incomplete, it is only by the adoption of a comprehensive classification that the science of dermatology will be advanced."

AMERICAN JOURNAL OF SURGERY.

(March, 1914, xxviii, No. 3.)

Abstracted by CHARLES T. SHARPE, M.D.

A NOTE ON THE MANAGEMENT OF BURNS. JOHN C. PLAIN, p. 117.

The author deprecates two procedures sanctioned by most of our text books. The first is the early puncturing of blisters and the second is the applications of

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carron oil and like remedies. He advised leaving the blister alone and the using of strips of gauze which have been previously soaked in a 2 per cent. solution of picric acid in dilute alcohol and over this a thin layer of cotton, to be held in place by any suitable means. The areas are first cleaned with hydrogen peroxide. If sloughing does occur, the procedure is changed by placing strips of rubber tissue cleansed in 1-1000 bichloride of mercury and then the above dressing.

CANADIAN MEDICAL ASSOCIATION JOURNAL.

(March, 1914, iv, No. 3.)

Abstracted by CHARLES T. SHARPE, M.D.

THE TREATMENT OF TABES DORSALIS AND GENERAL PARESIS
WITH SALVARSAN. GORDON BATES, GEORGE S. STRATHY, and C. S.
McVICAR, p. 197.

This is a report of ten cases treated by the intensive method and the results have been encouraging.

INDIANAPOLIS MEDICAL JOURNAL.

(March, 1914, xvii, No. 3.)

Abstracted by CHARLES T. SHARPE, M.D.

THE TRANSMISSION OF LEPROSY BY THE BED-BUG. J. H. HARE,
p. 101.

Hare believes that bed-bugs are a possible and a very probable means of transmission by their bite, within a certain period of time.

THERAPEUTIC GAZETTE.

(February, 1914, xxx, No. 2.)

Abstracted by CHARLES T. SHARPE, M.D.

SYPHILIS AS A CAUSE OF PROGRESSIVE SPINAL MUSCULAR
ATROPHY. CHARLES W. BURR, p. 90.

In five cases of spinal progressive muscular atrophy the author found a positive Wassermann reaction in one, a weakly positive reaction in two, a negative reaction in one, and in the fifth case the result was lost, but the patient showed clinical evidence of syphilis.

NEW ORLEANS MEDICAL AND SURGICAL JOURNAL.

(April, 1914, lxvi, No. 10.)

Abstracted by CHARLES T. SHARPE, M.D.

DRUG ERUPTIONS. ISADORE DYER, p. 711.

Dyer discusses this question from both ends, namely the drug and the type of eruption it produces; and the type of eruption with the drugs producing it.

The author is quite frank in stating that the list is not exhaustive but helps to draw attention to the importance of drug eruptions.

PELLAGRA. P. BAYER, p. 718.

This article of twelve pages is reproduced from Rayer's atlas of Skin Diseases, written in 1835. The editors of the Journal were led to reproduce it because of its splendid clinical observations.

URTICARIA. AN EXPERIMENTAL LESION PRODUCED BY THE LOCAL APPLICATION OF BETAIMIDOZOLYLETHYLAMIN. ITS RELATION TO INTESTINAL TOXÆMIA. ALLAN EUSTIS, p. 730.

Eustis produced urticaria by the application of betaimidozolyethylamin to the skin. He believes that this is an explanation of the ætiology of urticaria and states that when histidin is allowed to putrify, this ætiological factor is produced in the intestine and that it is this which causes the wheals to arise.

Gilchrist has shown that urticaria is produced by a circulating toxin and in this Prof. William Welch concurs.

H. Salomon has obtained good results in the treatment of urticaria by having patients abstain from all albumin for a period of two weeks. The diet he permitted consisted of tea, coffee, bouillon, lemon and grape juice, potatoes, rice, cereals, and plenty of butter and sugar with 200 gms. of bread made of coarse flour.

As a laxative, Eustis recommends:

R Hydrarg. chlor. mitisgr.iii
Phenolphthalein,
Pulv. rheiãã gr.vi.
M. et. ft. Caps. No. iii.
Sig.: One every half hour at night.

The intestinal toxæmia can be easily judged by frequent examination of the urine for indican, and whenever present in more than a trace, protein food should be eliminated from the diet. A virulent culture of the bacillus bulgaricus has also given good results.

AMERICAN JOURNAL OF UROLOGY.

(April, 1914, x, No. 4.)

Abstracted by CHARLES T. SCHARPE, M.D.

THE RELAPSES AFTER SALVARSAN. GAUCHER, p. 181.

Gaucher's article is a report of thirty-one cases treated by a few injections of salvarsan, which subsequently showed further evidence of the progress of the disease. He claims that the system of treating syphilis by the use of salvarsan and mercury and attributing the beneficial results to the salvarsan is all wrong; that salvarsan is practically useless. He states that "Salvarsan exclusively acts on cutaneous and mucous ulcerations. The cicatrization is perfect, the lesions heal, but they relapse. Salvarsan has no action on visceral syphilis, particularly in tabes; this must be understood once and for all, because there is a tendency to take advantage of these unhappy persons by means of this drug."

"Salvarsan may be employed in individuals who do not tolerate mercury or when this drug proves itself insufficient, on the condition that these subjects are not the bearers of any visceral lesion and after the liver, heart, nervous system, eyes and ears have been thoroughly examined. One should always bear in mind that, even in small doses, salvarsan may be dangerous and even fatal in its effects."

MONTHLY CYCLOPEDIA AND MEDICAL BULLETIN.

(April, 1914, xvii, No. 4.)

Abstracted by CHARLES T. SHARPE, M.D.

USE OF EPINEPHRIN FOR PROPHYLACTIC PURPOSES BEFORE SALVARSAN INJECTIONS. GALLIOT, p. 212.

Galliot advises the administration of 15 to 20 drops of the 1:1000 solution of epinephrin in a little water, ten to fifteen minutes before the injection of salvarsan.

NEW YORK STATE JOURNAL OF MEDICINE.

(April, 1914, xiv, No. 4.)

Abstracted by CHARLES T. SHARPE, M.D.

LICHEN IMPLANUS. WILLIAM B. CUNNINGHAM, p. 212.

This is a discussion pertaining to the aberrant forms of lichen planus.

QUEEN'S UNIVERSITY, PUBLICATION NO. 8.

(Issued by the Medical Faculty, Queen's University, January, 1914.)

NOTE ON SALVARSAN IN THE TREATMENT OF SYPHILIS. W. T. CONNELL, p. 47.

There is nothing new in this short article.

BOSTON MEDICAL AND SURGICAL JOURNAL.

(Jan. 15, 1914, clxx, No. 3.)

Abstracted by CHARLES T. SHARPE, M.D.

LEPROSY. SOME NOTES ON SYMPTOMS. JAMES A. HONEY, p. 85.

This article is a clinical study of leprosy and especially of the advanced cases.

(*Ibidem*, Feb. 5 and 12, 1914, clxx, No. 7.)

LEPROSY: THE PULSE AS A POSSIBLE INDICATOR OF THE PROGRESS OF THE DISEASE. (A Preliminary Note.) JAMES A. HONEIG, p. 233.

In the morning the pulse rate is higher than at evening, often markedly so. This reversal of the usual febrile diurnal pulse may prove, by further investigation, to be of real prognostic importance.

This clinical observation was carried out with sixteen patients, during the year 1913.

(*Ibidem*, March 26, 1914, clxx, No. 13.)

THE TREATMENT OF SYPHILITIC DISEASES OF THE CENTRAL NERVOUS SYSTEM BY INTRAVENOUS INJECTIONS OF SALVARSAN. LESLEY H. SPOONER, p. 441.

This is a statistical report of one and a half year's work at the ambulatory neurological clinic of the Massachusetts General Hospital.

The author's conclusions are given here.

1. The syphilitic character of the process was proved, with one exception, in all the cases upon which this work is based.

2. It is possible to treat in a satisfactory manner, syphilitic diseases of the central nervous system by intravenous salvarsan, in an ambulatory clinic.

3. Small doses of the drug are necessary for this purpose, but such dosage yields results.

4. With the exception of the six cases placed subsequently on serum treatment and excluded from this paper, symptomatic improvement has resulted from thorough treatment in a high percentage of cases of tabes and in all cases of syphilis of the central nervous system. No distinct improvement has resulted from treatment of the few cases of general paresis under observations.

5. Improvement in strength and gain in weight is the rule in those who receive benefit. The relief of lancinating pains in tabes, and headache in cerebral syphilis is most striking.

6. Biological and cytological changes (in blood and spinal fluid) indicate that there is an organic basis to this symptomatic improvement. It is regrettable that those observations were of necessity so limited.

7. Improvement has been maintained over a long period of time—in many instances for from one to two years. The results of laboratory investigation, when obtainable, and the amelioration of symptoms correspond.

8. Whereas the failures have been in old-standing cases, it is impossible to show any constant relationship between the degree of improvement and the duration of the nervous lesion.

9. The most striking improvement follows the first or second injection. Treatment must, however, be persistent and prolonged and should be continued even if all symptoms and laboratory findings have long disappeared.

10. Reactions are infrequent with small doses of the drug. Accidents are rare.

11. Focal accentuations of symptoms (Herxheimer) are disagreeable, but of short duration. These are often a hopeful sign.

12. The most pronounced successes are in those who show evidence in blood or spinal fluid of intense syphilitic infection. The failures have occurred in those showing feeble reactions.

13. Phthisis seems worthy of consideration as a contra-indication.

14. This treatment might well be advised in all cases of syphilitic diseases of the central nervous system and abandoned for the serum treatment, when conscientious effort in this simple and safe procedure has failed.

The tables accompanying this article are of very great interest.

SALVARSANIZED SERUM ("SWIFT-ELLIS TREATMENT") IN SYPHILITIC DISEASES OF THE CENTRAL NERVOUS SYSTEM. JAMES B. AYER, p. 452.

The author is to be congratulated upon the splendid article produced. It is intensely interesting and should be read carefully. His conclusions only can be given here, and these are:

The method is safe. It is effective in many cases where other treatment has failed. It undoubtedly attacks syphilis from the ætiological point of view, thus tending to cure the disease as well as relieve symptoms. Its greatest effect is in the group of cerebrospinal syphilis, in which a cure may confidently be looked for in some cases, with persistent treatment; second, in tabes, in which arrest of the disease process is often possible by this means; least effective in general paresis, when well developed, though here, if taken in the pre-paretic stage, encouraging results may be obtained.

With the originators of the method, we agree that persistence in its use is the keynote to success in the case of salvarsanized serum; consequently an estimate

from the injection of one or two doses is a judgment more of the "reaction," which in some cases is severe, than of the therapeutic effect of the serum.

With the technique of administration and necessary control examinations as laborious as at present, we do not expect to see this form of treatment in general use, but believe it should be employed by those especially trained, when other treatment fails in whole or in part, or in cases where haste is required in order to save vital tissue.

(The discussion of these two interesting papers will be found on pages 465 to 467 of the same Journal.)

(*Ibidem*, Apr. 16, 1914, clxx, No. 16.)

THE IMPORTANCE OF DIAGNOSIS AND TREATMENT OF PRIMARY SYPHILIS. C. MORTON SMITH, p. 609.

Smith points out the importance of early treatment, to protect the nervous system.

BOOK REVIEW.

SKETCHES FROM MY LIFE. 1833 to 1913. By DR. JAMES CLARKE WHITE, Cambridge, 1914.

It is devoutly to be desired that all men and women who have reached the age of seventy years should write down their recollections. Such documents are of the greatest value to the historian. No matter how modest a station in life the writers may have occupied, the simplest incidences of their daily life would help to complete the picture of life in times that are past. Of how much more value is it when so eminent a man as Prof. James C. White tells of men and movements of eighty or less years ago.

The opening chapter of the book now before us depicts his boyhood days in Belfast, Maine. It shows how he dressed, and tramped, and fished; what he ate and what it cost; how he did his chores and his lessons. Then follow chapters on his student life in Harvard College, in the Tremont Medical School and in Vienna. These are full of interest, and reveal the author's systematic and precise order of mind, as they are copied from diaries he kept. They also show how greatly educational advantages have increased since 1849.

Beginning the practice of medicine in Boston in 1857, he continued there in active work until a year or so ago, and during these years he worked with zeal and discretion for reform in the teaching of medicine. His many papers and addresses on the subject are here reprinted. He has had the satisfaction of seeing his endeavors crowned with success.

During his long and active life he has been a member of many medical societies and clubs, in all of which he ever took a prominent part. An account of his work in them for the general good are here outlined.

The book closes with an account of medical life in Boston fifty years ago; a short account of the author's travels; and a list of his many papers published and unpublished.

It is in all a most interesting human document. When one reads it he is not surprised that Dr. White steadily and rapidly rose in his profession and became the man whom the American dermatologists chose without a dissenting voice to represent them as President of the International Dermatological Congress when it met in New York in 1907. To the older men we commend the book as it will bring back to their remembrance many events of their own life. The quality of men has changed since 1833 and is still changing. We wish that the younger men would read these recollections, and profit by the example of a life of high endeavor, filled with good work, conscientiously done.

G. T. J.

THE JOURNAL OF CUTANEOUS DISEASES

VOL. XXXII

SEPTEMBER, 1914

NO. 9

A STUDY OF THE SPINAL FLUID WITH REFERENCE TO INVOLVEMENT OF THE NERVOUS SYSTEM IN SECONDARY SYPHILIS.*

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THE view that the central nervous system is attacked late in the incidence of syphilis, and that the various forms of cerebro-spinal syphilis are manifestations of the tertiary nature of the disease, is no longer tenable. That there exists in the nervous system a peculiar tendency to latency and to slow, insidious development of the disease process, is undeniably a fact. The fate of every syphilitic, however, with regard to the incidence of cerebro-spinal lues, whether this occurs early or late in the course of the disease, is in all probability determined in the first months of the infection.

The infection of nerve tissue by the *Spirochæta pallida* is without doubt dependent upon several factors. Individual susceptibility, neuropathic heredity, alcoholism and trauma are all to be reckoned with. Moreover, the strain of the organism, hypothetically at least, may also be a determining factor in the localization of the disease process to the nervous system. That certain individuals, infected from the same source, are prone to such involvement of the nervous system, is a clinical fact well recognized. Our ignorance of the life history of the spirochæta does not permit us to speak definitely

* Read before the 38th Annual Meeting of the American Dermatological Association, Chicago, Ill., May 14-16, 1914.

as yet concerning the various strains. That there exist, however, in the same strain and in the same culture organisms of different degrees of virulence, different resistance and vastly different viability, is an observation familiar to all who have worked with the *Spirochæta pallida* in the living state. It appears to us that the explanation of the selective action of this organism upon certain systems will in time be discovered through the unraveling of its life history and its separation into definite strains. Occasional involvement of the nervous system in the first months of syphilitic infection has been known clinically as long as the disease has been carefully studied. The isolated palsies, symptoms referable to basal meningitis and hemiplegia, have been noted quite early in the disease, and have been interpreted as evidence of precocity rather than as part of the secondary syndrome. It was not until a study of the spinal fluid early in the course of the disease was undertaken, that special attention was called to a true early involvement of the nervous system in syphilis.

The first observations are those of Ravaut,¹ Widal and Sicard,² who, even before the Wassermann reaction was applied to their findings, described marked chemical and cellular changes in the cerebro-spinal fluid of syphilitics, both early and late. Ravaut has perhaps carried his researches in this field further than has any other investigator. In a monograph published in 1903, under the same title as this paper, Ravaut¹ found a very high percentage of involvement of the nervous system early in the secondary period. In a personal communication to one of us last summer, he stated that he believed the nervous system affected in from 60 to 70 per cent. of all cases during the secondary stage.

An elaborate study made by Engman, Gorham, Buhman and Davis³ in 1913, led them to conclude that the nervous system was attacked during the first two years of infection in less than 10 per cent. of the cases. In none of their cases in which there was an early involvement were any active cutaneous symptoms present.

Altmann and Dreyfus,⁴ in a series of cases, found involvement of the nervous system in 2 cases out of 8 in which a primary lesion alone was present. In 36 cases of syphilis in the secondary stage, they found only 22 per cent. in which the spinal fluid could be said to be entirely normal—that is, the involvement of 78 per cent.

At Dr. Ravaut's suggestion, we undertook, at the beginning of this year, a routine spinal puncture of all cases of syphilis seen during the primary and secondary period, with a view to determining for ourselves the prevalence of the involvement of the nervous sys-

tem early in the disease. A description of the methods employed by us is given below. In a number of our earlier cases, the spinal fluid obtained was searched with the dark field for spirochætæ; in no case, however, were they found. A like negative result has been reported by all other observers except Dohi and Tanake,⁵ who were able to find the organism in one case of papular syphilide. Against this finding, however, are the negative results of Widal⁶ and Ravaut,¹ Libert, Rosenberger,⁷ Gordon, Buschke, Fischer, and others. Gaucher and Merle⁸ report the finding at autopsy of the *Spirochæta pallida* in the cerebro-spinal fluid in a case of syphilitic hemiplegia.

On close analysis, there is really no apparent reason why one should not expect to find the nervous system involved, or at least invaded by the spirochætæ early in the course of the disease. It was an observation of Brissaud's that the syphilitic virus had a particular predilection for ectodermic structures. If we recognize that early in the disease, dissemination of the syphilitic infection is hamatogenous, it is hard to see just how the nervous system could escape. It must be remembered also at the outset, that a negative finding at a particular time must be carefully scrutinized from two different standpoints: first, that the involvement is not yet present and, second, that it may not be sufficiently extensive to cause a meningeal reaction which would be manifest by a practical test. Ravaut observed that a negative finding became positive at a subsequent puncture, even in the absence of symptoms pointing to nervous involvement.

Ravaut tabulates his results to show the relation that exists between the type of cutaneous lesion and the involvement of the nervous system. He examined 84 women in the secondary period of syphilis. Thirty-six of these were without manifestations or with a slight roseola, and in this group only 3 presented signs of reaction on the part of the nervous system. Of 36 in which the syphilide was of a papular nature or in which there were pigmentary syphilides, 26 showed evidences that the nervous system had been attacked. It must be said here, however, that most of these patients were subject only to a single examination, and the negative finding with mild lesions, Ravaut admits, might easily have become positive at a later period. In the 10 cases with papular and pigmentary syphilides in which no reaction was found in the cord, he states that it is impossible to say whether such had not already disappeared, or that it would not, on the other hand, present itself at a later period. In 4 cases of iritis, one showed a very marked involvement.

In the other 3, the puncture was made a long time after the onset of the accident, and the spinal fluid was normal. The possibility that the length of time since the onset of the lesion in these 3 cases may have been a factor in the negative outcome, is suggested by 2 cases of secondary optic atrophy examined by La Personne, Opin and Lesourd,⁹ in both of which a marked reaction was found at the onset. Later, however, when the patients had been under treatment for a long-standing chorio-retinitis, a puncture proved entirely negative. Ravaut concludes that in a general way syphilitics presenting cutaneous manifestations of an extensive and infiltrative type are very apt to show meningeal reaction. This meningeal reaction is particularly persistent in pigmentary syphilides. Conversely, those patients who show no active manifestations have only a slight roseola, or present lesions which are generally transitory in their character, are not as apt to exhibit a meningeal reaction. He states, furthermore, that persistent secondary syphilides are coincident, in the majority of cases, with reaction on the part of the central nervous system. This parallelism is, of course, schematic.

Spinal puncture is entirely without danger in these cases. A few of the patients, it is true, suffer from the symptoms of meningismus. A small proportion of this number have vomiting and a slight elevation of temperature. Dreyfus, who found such reactions in 13 per cent. of his cases, makes the statement that in general they occurred in patients in whom the fluid was entirely normal. Ravaut, on the other hand, states that this reaction occurs most frequently in patients in whom there is involvement. From the standpoint of symptomatology, Ravaut states that the intensity of headache in the secondary period is far from being parallel with the intensity of the reaction in the cerebro-spinal fluid. One syphilitic with cephalalgia may present a striking reaction: a second with the same symptoms, no reaction.

As regards the relative significance of objective findings in the spinal fluid, Widal and Lesourd,¹⁰ Brissaud and Briey,¹¹ found lymphocytosis as a rule to be the most constant finding in connection with symptoms referable to the central nervous system.

MATERIAL AND METHODS.

The material of this study consists of a total of 36 cases representing all types of secondary syphilitic manifestations, including several late recurrences and precocious malignant forms of the disease. In all the cases a positive objective diagnosis could be

made from the lesions, and the Wassermann reaction on the blood was employed only for confirmation and for comparison with the spinal fluid findings. The reaction in the blood was strongly positive in 34 cases, no record having been preserved of the other 2. At the outset, the protocols included notes on the eruptive lesions present in the cases, symptoms complained of by the patient which might prove a guide to the presence of central nervous involvement, and memoranda upon the pressure of the spinal fluid, its cellular and albumin content, examination for spirochæta, and the Wassermann reaction on the fluid and the blood. Notes on the patient's reaction to puncture and his previous treatment were also included. In each puncture about 5 cubic centimetres of fluid were drawn, and this amount was divided into three parts, the first being used for the cell count, the second for the Wassermann reaction, and the third for the determination of the albumin and globulin content. For the last mentioned, a simple boiling test was employed, rather than the well-known but more elaborate methods for the separate determination of globulin and albumin—Widal and Ravaut having found that the increase is easily and simply determined in this way. A slight opalescence is of course a normal finding in the spinal fluid on boiling. The practiced eye soon accustoms itself to even slight deviations from the normal. Our earlier estimation of cellular content by the staining of a smear from the centrifuged fluid was replaced after the first few examinations by a careful cell count. The use of an acetic acid hæmolytic agent to destroy the few red cells occasionally present proved rather unsatisfactory, and in the effort to find a more reliable differentiator for the white cells, one of the writers attempted, in the later examinations, an apparently novel application of an old blood-counting method, with very satisfactory results. This consisted simply in adding one or two drops of Unna's polychrome methylene blue stain to about two cubic centimetres of the fluid, putting a drop of the mixture in the counting chamber and allowing it to stand for a few minutes. The leucocytic elements take the basic stain and are then differentiated with gratifying ease and accuracy. The trifling dilution due to the stain is negligible and can easily be kept constant for a series of counts.

In the course of the investigations, it became evident that a study of the cranial nerves might contribute facts of importance relative to the extent and character of central nervous involvement, and accordingly, with the coöperation of Professor Walter R. Parker, routine examinations of the fundus of the eye were made in

26 out of 36 cases. To this examination we feel that special importance may be attached, since the anatomical relations and character of the optic nerve and the retina, as portions of the central rather than the peripheral nervous system, makes ophthalmoscopic study of these structures a near approach to objective examination of the brain itself. At a somewhat later time we were impressed with the importance of an examination of the eighth cranial nerve, even in the absence of symptoms evident to the patient, and in 13 of the later cases Professor R. Bishop Canfield has kindly coöperated in the carrying out of hearing tests and examinations of the vestibular apparatus. The occurrence of seventh nerve palsy of the Bell type in two of our recent cases has emphasized to us the possible value in future studies of a complete neurological examination of the patient, regardless of the symptoms of which he may complain, and such examinations are now being made through the courtesy of Professor Carl D. Camp.

STUDY OF DATA.

Most of the data obtained have proved amenable to tabular presentation, and are condensed into this form. Certain cases, however, were of sufficient special interest to warrant giving fuller accounts of them. As previously stated, the albumin and globulin content was estimated by boiling a portion of the freshly drawn fluid. The counts were then made, and all cases in which the number of lymphocytes did not exceed 10 per cubic millimetre were looked upon as normal in this particular. In the tables, the spinal fluid findings are condensed by simply classifying a fluid with no marked pressure increase, no increased albumin content, less than 10 cells per cubic millimetre, and a negative Wassermann reaction, as "negative." In only two cases did we deem the pressure to be significantly increased, judging by the rate of flow, and in both these the fluid spurted in a solid stream over the operator's gown when the stylet was removed from the needle. One of them will be specially discussed later. Fluids showing positive findings are rated under the headings "albumin," "cells," and "Wassermann." An effort at quantitative estimation is made in the designations +, ++, +++, +++++. Blanks mean that the fluid was not examined for the particular element in question, or that in the case of cell count the method was superseded as above mentioned.

After puncture, patients were directed to lie down without a pillow and instructed to remain lying for at least 6 hours, and

longer if they experienced any discomfort. Later in the series, patients were treated by having the foot of the bed elevated about 6 inches for 12 hours. These cases are designated under the head of "Reaction" by the letters "NM" (new method). The usual type of reaction consisted of headache of varying intensity, with dizziness, usually present only on sitting or standing. Severe reactions exhibited persistent headache of great intensity, with nausea, vomiting, and in several cases syncope and prostration on attempting to rise. The severer headaches were uninfluenced by the coal-tar analgesics, and required codeine in large doses for relief. Elevation of the foot of the bed was effective in some cases. The patients showing mild reactions complained of nothing more than slight frontal headache or slight stiffness of the neck with dizziness.

The tabular references under the head of "previous treatment" include the term "pills," by which is meant the protoiodide of mercury in such doses as one-fifth of a grain, as symbolic of the inefficient combinations of mercury with small doses of iodide of potash, so often employed by the general practitioner. By "vigorous Hg." is meant a good course of rubs or the intramuscular injection of mercury salts in sufficiently large doses and at the proper intervals to constitute an intensive treatment. Nonspecific and local treatment are rated as negligible.

Under the heading "general health," an attempt was made to align the constitutional disturbance attributable to the infection into a terse estimate for comparative purposes. Slight anæmia, with a loss of 2 to 5 pounds in weight and mild asthenia which did not incapacitate the patient for work, with occasional nocturnal osteocopic pains, cephalalgias and myalgias was rated as a "slight" effect on the general health. A "moderate" effect was regarded as including a blood picture of three million five hundred thousand to four million red cells, a hæmoglobin of 70 per cent., a sharp drop of 5 to 15 pounds in weight, malaise with partial incapacity, anorexia, slight fever and pronounced symptoms of bone involvement. Our severe cases showed marked incapacitating asthenia and prostration, losses in weight varying from 15 to 40 pounds or more (syphilitic cachexia), symptoms of meningismus, hydrarthrosis and pronounced anæmias. The individual habitus of the patients is of course allowed for, and the writers realize that such a classification involves a large subjective element.

No.	Cerebro-spinal fluid			Fundus	N. VIII	Eruption	Central Nervous System symptoms	Previous Treatment	Reaction to Puncture	General Health
	Cells	Albumin	Wassermann							
1	.....	+++++	+++++	Marked neuroretinitis	.....	Papular, later follicular	Violent headache	None	Relief of meningismus	Severely affected
2	.....	++	++	.....	.....	Late papular, mucous patches	None	Neosalvarsan vigorous Hg. Pills	Moderate	Severely affected
3	.....	++	+++++	Marked neuroretinitis	.....	Alopecia Leucoderma colli	None	Hg. Pills	Severe	Moderately affected
4	.....	Negative	Negative	.....	.....	Roscola Papular slight	None	Pills	None	Slightly affected
5	.....	Negative	Negative	.....	.....	Roscola Alopecia	None	Vigorous Hg.	None	Marked, with later improvement
6	6 per cu. mm.	Negative	Negative	Slight neuroretinitis	.....	L. I. extrag. Roscola	Severe headache	None	Severe	Slightly affected
7	3 per cu. mm.	Negative	Negative	.....	.....	Recurrent follicular mucous lesions	None	Neosalvarsan vigorous Hg.	Severe	Slightly affected
8	3 per cu. mm.	Negative	Negative	Marked neuroretinitis	.....	Alopecia, papular large	None	Inefficient	Slight	None
9	9 per cu. mm.	Negative	Negative	Negative	.....	Follicular pustular	None	None	Slight	None
10	3 per cu. mm.	+	Negative	.....	.....	Roscola L. I.	None	Pills	None	None
11	.....	Negative	Negative	Negative	.....	Preoculous nodular ulcer	None	None	Moderate	Severely affected
12	1 cell High pressure	Negative	Negative	Slight neuroretinitis	.....	Mucous lesions	None	Pills	None	None
13	2 per cu. mm.	++	Negative	Negative	.....	Roscola papular alopecia	None	Pills	Slight	Slightly affected
14	1 cell High pressure	Negative	Negative	Negative Later very marked neuroretinitis	Negative	Rupia	None	Pills	None	Moderately affected
15	None seen	Negative	Negative	.....	.....	Mucous lesions	None	None	Severe	None
16	2 per cu. mm.	++	Negative	.....	.....	Roscola mucous lesions	None	None	Moderate	None
17	2 per cu. mm.	Negative	Negative	Neuroretinitis Early arteriosclerosis	.....	Roscola Mucous lesion	None	None	None	Moderate
18	4 per cu. mm.	Negative	Negative	Negative	.....	Papular pustular L. I.	Severe headache	None	Moderate	Moderate

No.	Cerebro-spinal fluid			Fundus	N. VIII	Eruption	Central Nervous system symptoms	Previous Treatment	Reaction to Puncture	General Health
	Cells	Albumin	Wassermann							
19	34 per cu. mm.	+++	+	Arteriosclerosis perivasculitis	Marked involvement	Annulo-papular mucous lesions Follicular	Headache, extreme "per-vousness"	Pills	Slight	Moderate
20	4 per cu. mm.	+	Negative	Slight neuro-retinitis	.....	Roseola	None	None	Very severe	Severe
21	26 per cu. mm.	Negative	+	.....	.....	Papular follicular mucous lesions	Severe headache	Pills	None	Slight
22	1 per cu. mm.	+	+	Slight neuro-retinitis	.....	Roseola	Insomnia	None	Slight	Severe
23	2 per cu. mm.	Negative	Negative	.....	.....	Recurring mucous lesions	Sluggish pupils	Old salvarsan fair Hg.	Slight	None
24	8 per cu. mm.	Negative	Negative	Neuroretinitis	Slight involvement	Roseola	None	None	None	None
25	64 per cu. mm.	++++	Negative?	Hyperemia only	.....	Mucous lesions	Violent headaches	None	Relief of meningitis	Moderate
26	4 per cu. mm.	+	Negative	Neuroretinitis	.....	Mucous lesions	Headache	Pills	Very severe N. M.	Extremely severe
27	.....	+++	+++	Slight neuro-retinitis	Negative	Papular follicular	None	None	Very severe N. M.	Slight
28	2 per cu. mm.	++	Negative	Slight neuro-retinitis	Negative	Papular	None	None	Moderate	Moderate
29	18 per cu. mm.	+++	+++	Choroiditis arteriosclerosis	Marked involvement	Mucous lesion	Headache N. VII palsy	Inefficient	None N. M.	Slight
30	4 per cu. mm.	+	+	Marked neuro-retinitis	Negative	Alopecia, early follicular	None	Pills	None	None
31	2 per cu. mm.	+	Negative	Slight neuro-retinitis	Negative	Papular	None	Fair Hg.	Severe N. M.	Slight
32	11 per cu. mm.	++	++	Hyperemia only	Negative	Late papular and follicular	Increasing "nervousness"	None	Slight N. M.	Slight
33	1 per cu. mm.	+	+	Negative	Negative	Papular large	None	None	None N. M.	Slight
34	21 per cu. mm.	++	+	Slight congestion only	Moderate involvement	Papular follicular	Bell's palsy N. VII	None	None N. M.	Slight
35	3 per cu. mm.	Negative	+	Moderate neuroretinitis	Negative	Late palmar, papular	None	Old salvarsan Pills	Severe N. M.	None
36	24 per cu. mm.	+++	+	Negative	Slight involvement	Alopecia only	None	None	None N. M.	Severe

Of the 36 cases examined, 24 showed involvement of the central nervous system as gauged by the cerebro-spinal fluid findings. This represents 66 $\frac{6}{10}$ per cent. of the total. The separate studies made are summarized in tabular form below.

EXAMINATIONS OF THE FUNDUS OCULI.

The fundus was subjected to ophthalmoscopic examination in 27 of the 36 cases. The results are as follows:

Positive C. S. F. findings in 19 cases	Neuroretinitis in 11 cases	No neuroretinitis but other findings in 5 cases	Negative fundus in 3 cases
Negative C. S. F. findings in 8 cases	Neuroretinitis in 4 cases	No neuroretinitis but other findings in none	Negative fundus in 4 cases

The ocular findings other than neuroretinitis, associated with central nervous involvement as indicated by the spinal fluid are: choroiditis, 1 case; retinal or nerve hyperæmia, 3 cases; arteriosclerotic changes, 2 cases; perivasculitis, 1 case. Arteriosclerosis was also found in association with neuroretinitis in 1 case with negative fluid findings.

The presence of neuroretinitis in so considerable a proportion showing no abnormalities in the cerebro-spinal fluid is, in the opinion of the writers, almost presumptive evidence of the existence of one of two conditions: either of involvement of the central nervous system as yet not extensive enough to be recognized by the signs of meningeal reaction in the cerebrospinal fluid, or of a previous more extensive involvement which has cleared up to such an extent that frank findings in the fluid have disappeared. The observations of La Persone, Opin and Lesourd⁹ in cases of optic atrophy may be taken, in our opinion, to further support this contention.

EXAMINATION OF THE ACOUSTIC COMPLEX.

Functional tests of the cochlear and vestibular portions of the eighth cranial nerve were made in 13 cases. Of these, 8 were negative and 5 positive.

N. VIII involved in 5 cases	C. S. F. positive in 4 cases	C. S. F. negative in 1 case
N. VIII not involved in 8 cases	C. S. F. positive in 8 cases	C. S. F. negative in 0 cases

The relative infrequency of this form of nervous involvement, as compared with that of N. II, would seem to be in accord with the more peripheral anatomical type of the acoustic nerve.

SUBJECTIVE SYMPTOMS OF CENTRAL NERVOUS INVOLVEMENT.

These were grouped from the histories or from hospital observation of the patients, under the designations given below:

	Headaches, severe.	Insomnia.	Increased nervous irritability.	Cranial nerve paralyses.	Negative.
C. S. F. positive	5	1	2	2	15
C. S. F. negative	2	0	0	0	11
Total.....	7	1	2	2	26

Thus, of a total of 12 cases presenting symptoms possibly indicative of central nervous involvement, 10 showed positive cerebrospinal fluid findings. One case with sluggish pupillary reaction proved to be negative in the fluid. Routine objective neurological examination has been only recently undertaken, and has not as yet yielded definite results.

REACTION TO PUNCTURE.

Under this heading we found that meningismus occurred just as frequently in those cases without involvement as in those in which involvement was demonstrable. We believe, however, that the elevation of the foot of the bed has undoubtedly served as a prophylactic and has reduced the number of reactions following puncture. It is probable therefore that Ravaut's statement that reaction is more likely to follow in those cases in which the meninges are involved, is correct, and that Dreyfus's statement that reaction occurs more frequently in normal cases cannot be substantiated.

PREVIOUS TREATMENT AND CEREBRO-SPINAL INVOLVEMENT.

Our figures under this heading are grouped under the captions previously explained as follows:

	Efficiently treated.	Inefficiently treated.	No treatment.
C. S. F. positive	1	12	11
C. S. F. negative	3	2	7
Total.....	4	14	18

Thus, of efficiently treated cases, only 25 per cent. showed involvement, while of inefficiently treated and untreated cases 70.8 per cent. showed involvement. The figures for efficiently treated cases are scarcely large enough to serve as a basis for broad therapeutic conclusions. It is also necessary to bear in mind the possibility that the well-treated cases may have shown an evanescent reaction earlier in the course of the disease. In spite of these considerations, the figures seem at least suggestive.

ERUPTIVE MANIFESTATIONS AND CEREBRO-SPINAL INVOLVEMENT.

In arranging this table, the following method was adopted: cases exhibiting polymorphous eruptions were rated as belonging to the group corresponding to the most prominent feature of the lesion. If, however, as in certain maculo-papular syphilides, both elements were prominent, the case was classed under roseola and under papular eruption also. An eruption which was papular with a marked follicular element was classified in the same way. A case showing nodulo-ulcerative tertiary lesions within 15 months after infection was grouped with the malignant pustular types, and one or two precocious papulo-pustular eruptions were rated as both papular and malignant. The figures, then, represent proportions rather than actual numbers.

	Cerebro-spinal fluid positive.	Cerebro-spinal fluid negative.
Roseola	5	4
Mucous membrane lesions	8	5
Papular eruption	13	3
Alopecia	4	2
Follicular syphilide	8	2
Pustular and precocious malignant types.....	3	2
Extragenital chancre	2	1
Chancre not involuted	4	3

This table at once directs attention to the marked preponderance of cerebro-spinal involvement in cases presenting efflorescences of the indurated, papular and follicular types. This finding accords well with that reported by Ravaut as mentioned above.

GENERAL HEALTH AND CEREBRO-SPINAL INVOLVEMENT.

The standard adopted for the various ratings is described above.

	Severe.	Moderate.	Slight.	None.
C. S. F. positive	7	5	8	5
C. S. F. negative	2	2	2	5

Classifying severe and moderate disturbances together, and slight and none together, the proportion of involvements in severe disturbances is as three to one, while in mild disturbances it is roughly as two to one. It is apparent that in our series there is an appreciably higher proportion of involvement of the nervous system in patients presenting severe constitutional symptoms than there is in those presenting mild symptoms.

TABULAR SUMMARY OF CEREBRO-SPINAL FLUID FINDINGS.

In 29 cases in which the albumin and cellular content and the Wassermann reaction were all investigated parallel, the following results were obtained:

Albumin and globulin in- creased in	Cells increased in	Pressure in- creased in	Wassermann positive in
17 cases.	8 cases.	2 cases.	10 cases.

In the 17 positive fluids of the same series of cases the following combinations of positive elements were found:

Albumin alone	Cells alone	Wasser- mann alone	Albumin and Cells	Cells and Wassermann	Albumin and Wassermann	Albumin, Cells and Wassermann
6	0	1	1	1	2	6

Of the total number of fluids studied (36), albumin was increased in 19, and the Wassermann reaction was positive in 14. This series of results would seem to place the increase in coagulable protein as shown by boiling as the most frequent change in the abnormal cerebro-spinal fluid in our series of cases of secondary syphilis. In this particular, we do not find ourselves in accord with the observations of La Personne, Opín and Lesourd, mentioned above. Next in order of frequency comes the positive complement fixation test. It is apparent that a change in one of the three constituents does not necessarily imply a change in all or either of the others.

The following brief discussion of 3 especially striking illustrative cases from our series precedes the statement of our conclusions.

CASE 1. H. C., age 28, bartender; brawl chancre on the right knuckle, contracted 2½ months prior to entry. On examination, spirochætæ were still demonstrable in the primary sore by aspiration, and an unusually striking maculopapulo-squamous eruption covered the forearms, face and trunk. No signs what-

ever of follicular involvement. Three days after entry, lumbar puncture was attempted, but owing to a scoliosis, the canal could not be entered. Twenty-four hours later, patient began to complain of intense headache, and some stiffness of the neck. During the next 4 days the headache increased in intensity. The neck became rigid and somewhat retracted; the patient was nauseated but did not vomit, and showed a distinct Koenig's sign. The nocturnal exacerbations were with difficulty controlled by large doses of codeine, and the patient was so dizzy most of the time that he almost collapsed on sitting up. There was no nystagmus and the patient did not complain of eye or ear symptoms. While the meningismus was at its height, a definite miliary follicular syphilide began to appear over the trunk, becoming more profuse as the meningeal symptoms gradually subsided. Improvement was very slow, however, and on the eleventh, lumbar puncture was successfully accomplished. The withdrawal of 5 cubic centimeters of fluid under apparently normal pressure gave the patient pronounced relief within an hour, and he passed his first restful night since entry. The cerebro-spinal fluid showed a marked increase in albumin and a strongly positive Wassermann. The count was rendered inaccurate by a slight blood contamination. There was a marked neuroretinitis, and the patient complained of diplopia. The effect of treatment became apparent in the gradual involution of the papular and follicular syphilides, which, however, were decidedly resistant and were still present on the date of discharge.

The striking feature of this case, as we watched its course in the clinic, was the remarkably clear association of the follicular syphilide with symptoms of intense central nervous involvement.

CASE 14. W. K., age 20, painter. Secondary syphilis, rupial lesions over the head and trunk. Papulo-ulcerative lesions on the mucous membranes; primary sore contracted 3 months prior to entry. Moderate asthenia without symptoms of central nervous involvement. Lumbar puncture yielded only one abnormal finding. The fluid spurted in a solid stream over the operator's gown when the stylet was withdrawn. The Wassermann reaction, cell count and albumin content were negative. The fundus oculi was reported normal for both eyes. The patient improved rapidly under 5 injections of neosalvarsan and was discharged, with arrangements made for a vigorous course of inunctions.

Four months later, the patient re-entered the clinic complaining of severe asthenia, loss of weight and disturbances of vision. Since he could not remain longer than 24 hours, no puncture was done. Fundus examination, however, showed a fulminating neurorretinitis with hæmorrhages into the disk and tremendous retinal œdema. N. VIII was negative. Neurological examination showed Argyll-Robertson pupils, external rectus weakness and absent knee-jerks. The patient admitted that he had neglected treatment since his discharge from the hospital.

In view of these findings, there is no reason to doubt that the cerebro-spinal fluid would have been positive on his second entry. This case illustrates clearly the fact already brought out, that a single negative examination of the fluid, even when accompanied by negative examination of the eye grounds, does not preclude the possibility of central nervous system involvement early in the secondary stage. It also seems not unreasonable to regard the high pressure of the cerebro-spinal fluid on the occasion of his puncture as the earliest manifestation, unsupported by any other finding, of what later proved to be a tremendous central nervous involvement.

CASE 27. J. L., age 21; entertainer. Primary lesion on the lower lip. Spirochætae were obtained by aspiration from the cervical bubo. Earliest signs of the onset of the infection dated back about 4 weeks. At the time of entry, the patient showed a mild developing roseola and a general adenopathy. Lumbar puncture showed a fluid with a +++ increase in albumin and a ++++ Wassermann. The cell count was unfortunately rendered inaccurate by blood contamination. While under treatment in the clinic, this patient developed a papular eruption on the forehead and scalp, and a follicular eruption over the trunk. He presented no

subjective symptoms of meningeal reaction. The fundus examination showed a low grade neuroretinitis and N. VIII was negative. This case is a fair example of a rather precocious type of central nervous involvement, practically concomitant with the appearance of the papular-follicular efflorescence, and hence with the generalization of the infection throughout the body.

CONCLUSIONS.

The writers believe that the following conclusions may be drawn from these studies:

1. A large proportion of all patients in the secondary period of syphilis, in our series 66.7 per cent., showed evidences in the spinal fluid of the involvement of the central nervous system.

2. From the special examinations made we must conclude that this does not represent the whole number who will at some time show, or who have not already shown, a reaction on the part of the central nervous system.

3. The absence of findings indicative of meningeal reaction in a single examination cannot be taken as conclusive evidence of freedom from central nervous involvement.

4. Any of the findings—lymphocytosis, increased albumin and globulin content and positive complement fixation test—may be present alone or in varying combinations, and each indicates involvement of the central nervous system.

5. Comparing this high ratio of early involvement with the relatively low ratio of later involvement as compared with the total number of syphilitics, we must conclude that the early involvement is for the most part a transitory manifestation.

6. The central nervous system is particularly likely to show involvement in cases in which the eruption is papular or follicular in type.

7. Marked subjective symptoms, such as headache, insomnia and nervous irritability, were for the most part accompanied by positive findings in the fluid in our series.

8. In a general way, cases in which there had been little or no treatment showed a higher percentage of involvement than those in which vigorous treatment had been inaugurated.

9. Involvement of the central nervous system was found in a relatively high percentage of those cases in which the general health was considerably affected.

10. The commonest finding indicative of meningeal reaction was the increased globulin and albumin content, the positive Wassermann ranking next, and lymphocytosis last.

11. As an aid to diagnosis and as a possible guide to prognosis, the value of the spinal puncture in cases of secondary syphilis can scarcely be overestimated.

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DISCUSSION.

DR. FORDYCE said there were many interesting points in connection with this paper on the study of the spinal fluid in syphilis that he would be able only to touch upon. First, in regard to the strain of the organism. He had long been convinced that there were various strains, and that one of these had a particular predilection for the nervous system. Dr. Henry J. Nichols, of the U. S. Army Medical School had called attention to this particular strain, and the occurrence of such cases in family groups supported this theory.

In regard to the percentage of cases of nervous syphilis, or syphilis that showed involvement of the nervous system, neurologists claimed that the number of such cases was not more than five or ten per cent. In a probably much larger percentage of cases there was, as Dr. Wile had pointed out, a transitory infection of the nervous system, which left no permanent effects. Dr. Fordyce said he had been studying this subject for the past two years, and more recently he had confined his investigations to the secondary stage of the disease. In about 30 such cases, where spinal puncture had been done and the fluid examined for its globulin content, lymphocytosis and the Wassermann reaction, he had expected to find involvement of the nervous system in from 40 to 50 per cent., but to his great surprise the percentage was considerably lower. He had the records of about 25 cases taken in various stages of secondary syphilis, and in perhaps 15 or 20 per cent. of these there was a cell count of over 10, which figure, according to Nonne, indicated a pathological increase. In not over 15 or 20 per cent. of the cases examined did the changes indicate a pathological condition in the cerebro-spinal fluid. He intended to pursue these investigations still further and make repeated punctures in these cases, as a single puncture did not teach us very much. The examinations should be made during the later period of the secondary stage, and especially after treatment with salvarsan. These studies, Dr. Fordyce said, were only preliminary, and would be reported more fully at a subsequent time.

DR. SCHIAMBERG, after referring to the scientific importance of the paper presented by Dr. Wile, said that the inclusion of the study of syphilis by dermatologists had added to the dignity and importance of dermatology as a specialty. The studies of Dr. Wile and his collaborator indicated how frequently the nervous system was involved, even during the early stages of syphilis. About two years ago, the speaker said, he saw a young man with a roseola, who was at that early period suffering from difficulty of speech and deglutition, ataxia, etc., symptoms resembling disseminated sclerosis; these promptly disappeared under the use of salvarsan and mercury. We are now beginning to learn that profound involvement of the cerebro-spinal axis was by no means of rare occurrence in early syphilis; this fact should stimulate dermatologists to study not only the blood but also the cerebro-spinal fluid in early syphilis, and to intensify the treatment in order to ward off later disastrous results.

DR. POLLITZER thought we were just on the threshold of our knowledge of cerebro-spinal syphilis. When we reflected on the pathological process that occurred in syphilis and the mode of infection, it seemed to him likely that not 15 or 25 or even 68 per cent. of the cases would show actual involvement of the central nervous system, but that probably 100 per cent. would show such involvement at some stage early in the course of the disease. Soon after infection had taken place, it seemed probable that the spirochætæ were carried by the blood-stream to every organ and tissue of the body and not least to the central nervous system, and whether we found them there or not depended on our methods. That we did not get manifestations of syphilis in every organ and tissue of the body might be due to the fact that the spirochætæ were destroyed in large part by the body's natural forces of defense, and in part perhaps, to the organisms rapidly passing into a "resting" or spore stage, where they might remain indefinitely without harm to their host until something—a trauma for instance—occurred to stir them into activity, when we might expect the late lesions of syphilis to develop. While this assumption was entirely hypothetical, we must bear in mind the fact that a resting or encysted form is a part of the life history of every protozoan body without exception, and if, on the other hand, the spirochætæ belonged to the schizomycetes, the clinical history of syphilis made the occurrence of spores extremely probable.

The practical lesson to be drawn from this paper, Dr. Pollitzer said, was the importance of early and energetic treatment in syphilis, and this lesson should be impressed particularly upon the general practitioner, in whose hands the course of syphilis in the individual and in the race rests. Upon the dermatologist rests the grave responsibility of the proper teaching of the treatment of syphilis.

DR. WILE said he agreed with Dr. Pollitzer that probably every case of syphilis would show involvement of the central nervous system at some stage early in the course of the disease—or at least that in every case there was some invasion of the cerebro-spinal system by the spirochætæ. Most of the French syphilologists taught that all headache in secondary syphilis, unless it was due to a periosteitis or a change in the cranial bones, was the result of a basal meningitis. Many of these nervous phenomena were transitory and disappeared under energetic treatment directed to the general system.

THE ABDERHALDEN TECHNIQUE AS APPLIED TO THE
DIAGNOSIS OF SYPHILIS.*

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A SCIENTIFIC question is solved as is a puzzle. In no man's brain does the answer spring full blown, but each one's contribution suggests a line of work to some one else, until after many trials, and after much tearing down and building up, the problem finally stands fully developed and unassailable. Nothing shows that men are really the vehicles of the times' ideas so well as the studies of immunity. On no one subject is the literature so voluminous, and the trend is all toward the idea that immunity is not a complicated matter of many interacting substances in the organism, but is simply one of the manifestations of ferment action.

Long dominated by the invaluable but involved hypothesis of Ehrlich with its polymorphous side chains, and intermediary bodies, each of which has as many names as Joseph's coat had colors, the ideas of immunity were for a long time hampered by what we may call a graphic conception. We visualized side chains, and our immunity concepts were symbolic rather than descriptive.

To America belongs the honor of breaking out from this restraint, and it was Vaughan's work and suggestions on the parenteral injection of proteins that gave the new trend to our conceptions of immunity. As we are becoming more and more aware, immunity is a simple matter of parenteral digestion by ferments elaborated by the body cells. These ferments may be retained within the cells or discharged into the blood, or may be shown in both the blood current and certain groups of cells coincidentally.

Abderhalden has applied the principle of parenteral digestion *in vitro* by subjecting the foreign protein to the ferment present in the blood serum, showing that the protein is broken down into simpler dialysable bodies, which may be detected in a dialysate by determining their amino acid groups with triketo-hydrinhydrinate.

The technique consists in mixing the immune blood with the thoroughly coagulated, washed, antigenic protein in a dialysing thimble and hanging the thimble in a capsule of distilled water. The

* Read before the 38th Annual Meeting of the American Dermatological Association, Chicago, Ill., May 14-16, 1914.

capsule is incubated for 12 hours or longer, and finally the dialysate is tested for amino acid groups with ninhydrin.

The possibilities which this work of Abderhalden suggests are numerous. Already the technique has been applied to many and diverse conditions from psychiatry to infectious diseases and to derangements of the internal secretory apparatus.

The limitations of the Wassermann reaction leave much to be desired of it as a test for syphilis. In the first place, as now used it is not a specific immune reaction, but a lipotropic phenomenon common to several diseases. The time consuming preparation of the necessary material and the necessity of carefully controlling and standardizing it detracts somewhat from its usefulness as a test. The experience and judgment necessary in a reliable Wassermann worker confine the reaction to the specialist and prevent its universal application. As now used there is no such thing as a specific syphilitic antigen.

Theoretically, then, the enzyme test as applied to syphilis has great advantages. In the first place it should be specific, and in the second place the technical procedure is simple in principle and the materials required small in number and amount. This technique consists in combining syphilitic tissue with suspected blood in a dialyzing thimble, incubating, and subsequent testing for amino acids by the biuret reaction or ninhydrin.

When we apply this test, however, we are confronted with certain technical difficulties. In the first place the blood must be drawn in such a way that no hæmolysis will take place, resulting in a pink serum after separation from the clot. The technique of withdrawal and subsequent handling must be reasonably aseptic, since bacterial decomposition splits proteins of all sorts and gives us amino groups in our dialysate. The quantity of blood should be sufficient to obtain 3 or 4 cc. of serum. The serum must be reasonably fresh, inasmuch as the ferment disappears probably inside of 12 hours.

Because of the difficulty in maintaining an absolutely aseptic condition of the ingredients, it is necessary to use toluol to prevent bacterial growth. The dialyzing sacs now on the market vary somewhat in their permeability to proteins, peptones and amino acids, so that it is necessary to previously determine by suitably controlled tests the usefulness of any sac. The sacs are not indestructible and great care must be taken in their handling and preservation that they be not injured, especially by vigorous boiling. It is well to retest them at stated intervals to determine their continued usefulness. The biuret test is not so useful as the ninhydrin

reaction because of the lack of delicacy and the pronounced color contrast.

The presence in human blood of amino acids, especially after heavy protein meals, makes it important to carefully control this factor.

We have therefore attempted to absolutely standardize the technique in order to limit the margin of error as much as possible. The technique as far as developed at present is as follows:

1. Testing the sacs for suitability. The sacs we use are the Carl Schleicher and Schüll, 579A. These are small thimbles, very convenient for use with small capsules made of short, thick test-tubes.

These thimbles are first thoroughly rinsed in distilled water and heated to 60 to 70 degrees centigrade, for about 5 minutes. The temperature itself is not important, but boiling must be prohibited and mere steaming permitted. These sacs are placed in capsules containing 8 cc. of sterile distilled water, upon which has been placed 6 drops of toluol. In each sac, with a sterile pipette, 1 cc. of hæmoglobin-free rabbit serum is placed and 6 drops of toluol. A cork is inserted in the tube and 24 hours at room temperature is allowed for dialysis. At the end of 24 hours, 5 cc. of the dialysate is withdrawn into a clean test-tube, 4 drops of one per cent. ninhydrin added and the fluid boiled for exactly one minute.

A sac whose dialysate shows more than the very faintest blue color should be thrown away, because it is too permeable. The sacs which survive this test are now thoroughly washed and preferably soaked for a few hours in distilled water, rinsed and heated as before. They are again placed in dialyzing capsules with 8 cc. of distilled water. In each sac, this time, is placed $\frac{1}{2}$ cc. of 1 per cent. silk peptone and dialysis allowed to go on at room temperature, for 6 to 8 hours. At the end of this time, 5 cc. of the dialysate, tested with 4 drops of the ninhydrin, should show a deep blue color. All sacs whose dialysate does not react in this way are discarded. Further, the tubes are all saved beside their respective sacs, and the depth of color as nearly as possible compared, for the purpose of matching the sacs in pairs or in groups of three. These sacs are numbered with India ink on their rims, for further identification. Since exactly 8 cc. of dialysate and $\frac{1}{2}$ cc. of peptone were used, followed by an equal incubation period, the intensity of color in equal volumes of dialysate with equal volumes of indicator, boiled for the same length of time, should be equal in equally permeable sacs. We think this point is important and will only use sacs belonging to the same group, when controlling a serum in the test.

The acceptable sacs are now washed thoroughly and placed in a jar of distilled water over chloroform and under toluol, until needed.

For use they are rinsed and heated as before and placed in the dialyzing capsules. One half cc. of serum is now placed in the sacs and a small piece of syphilitic tissue added. It was suggested by one of us (Varney) that human syphilomata theoretically should be more suitable for the test than the lesion in rabbit testicle, because of its greater specificity. We have therefore used small pieces of richly vegetating condyloma, which dark-field examination showed to be loaded with spirochætæ. Controlling this in a large number of tests, we have used the syphiloma of a rabbit's testis, rich in spirochætæ. The tissue is prepared by thoroughly washing in salt solution while fresh, to remove the blood (this is not so necessary in the case of the lesions in the rabbit testis) and then boiling thoroughly in distilled water until the water gives no reaction with ninhydrin. Small fragments of this tissue were preserved dry in sterile flasks and other fragments over chloroform, in distilled water, under toluol.

Toluol, 6 drops, is placed inside and outside the sacs, the capsule corked and the whole placed in the incubator for 12 to 18 hours. At the end of this time the dialysate is measured into test-tubes in quantities of 5 cc. per tube, 4 drops of ninhydrin added and boiled for exactly one minute. It is well to let the tubes stand a few minutes to develop the full depth of color.

For each serum to be tested, 3 tubes are necessary plus a common control, containing tissue and salt solution only.

In one tube we have human condyloma plus serum; in the second, rabbit syphiloma plus serum; and in the third serum alone. Obviously, a positive test should show a distinct blue in the dialysate of the sac containing tissue and none or a slight reaction in the serum control, depending upon the amount of amino acid present in the serum itself. We believe that the tissue should be boiled in fresh water a moment each time before being used, to insure its freedom from amino acids and chloroform, since it has seemed to us that chloroform interferes with the reaction.

The blood, we find, is best obtained directly in a Swift-Ellis tube by a large-bore McRae needle. This allows centrifugation if necessary, without transferring the blood. A further precaution to insure against hæmolysis is to have the Swift-Ellis tube kept in sterile physiological salt solution, ready for use.

The interpretation of the findings of the cases reported is as follows:

Of the 75 cases, 45 were clinically syphilitic and were positive to repeated Wassermann reactions. From this number of positive Wassermann findings, 35, or 78 per cent., were positive to the enzyme reaction with human condylomata. Six sera, negative to the Wassermann, showed positive findings to the enzyme reaction with human condyloma tissue; 5 of these presented clinically mixed infection conditions. Ten clinically positive cases with positive Wassermanns were negative to the enzyme condylomata. From the 43 cases in which rabbit syphilomata were used, 23 of which showed a positive Wassermann reaction, 14, or 60 per cent., were positive to the enzyme reaction; 9 sera from clinically syphilitic patients with positive Wassermanns failed to show the reaction with the syphilomata tissue from rabbits. Thus far, the human condylomata tissue has shown a greater percentage of positive reactions than the syphilomata of rabbits.

On the other hand, the condylomata tissue shows reactions from its mixed infection condition in non-syphilitic sera, when the patient harbors any mixed infection. The syphilomata from rabbits gave no reaction in the non-syphilitic conditions thus far examined. Syphilitic spinal fluid gave negative reactions in both tissues uniformly. Non-syphilitic diseases, such as scarlet fever in the florid stage, psoriasis, eczema, erythema multiforme, as well as ether-narcosis cases, were uniformly negative to both tissues with but one exception, and that a case of psoriasis whose sera gave a positive reaction to the human condylomata tissue; this patient presenting boils at the time the sera were taken.

These cases, with but few exceptions, were selected from the writer's own private cases and have therefore been under careful observation, both clinically and serologically, for a long period of time.

From these few experiments we think we are justified in assuming:

1. That the specificity of the Abderhalden technique applies to syphilis.
2. That syphilitics have in their blood serum enzymes which react with the protein of the organism.
3. That tissue derived from active human lesions are more specific than syphilitic tissue of the rabbit.
4. That mixed infection in the human lesion gives rise to error in mixed infections, as shown in our cases of sinus disease, furunculosis, etc.
5. Further work will be required to determine whether all syphilitics have the power of developing ferment and at what stages of the disease the test is present or absent.

[illegible]

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6. We believe that polyvalent antigens prepared from several stains of pure culture of the spirochætæ offer the best hope for further success with this technique.

7. That the degree of success with the test varies in proportion to the care and precision exercised in its execution.

8. That as applied at present the test does not approximate the Wasserman test in usefulness.

DISCUSSION.

DR. WILE, after expressing his admiration of the amount of work that must have been done in connection with the series of cases reported by Drs. Varney and Morse, said it was impossible to discuss this work intelligently unless one had some experience with the technique as applied to other diseases as well as syphilis. The speaker said that a few months ago he undertook some experiments with the Aberhalden technique as applied to other conditions than syphilis, and he had encountered many difficulties. The work done by the authors of this paper was very interesting in view of the specificity of the test.

DR. VARNEY said he thought the technique of this method was easy as compared with the original Wassermann test. Less skill was necessary in handling the material, and taken as a whole, he did not regard it nearly as difficult as the Wassermann technique.

WHITE SPOT DISEASE.*

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AND

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INTRODUCTION.

THE designation "white spot," as applied to a definite clinical entity referable to the skin, was first employed by Westberg in a paper which he published in 1901, under the title "Ein Fall von mit weissen Flecken einhergehender, bisher nicht bekannter Dermatoze." He used the term "white spot" merely as a descriptive adjective, qualifying a "hitherto unknown" dermatosis. In 1903

* Read in abstract before the Section on Dermatology of the American Medical Association, Atlantic City, June 25, 1914. The incomplete article was published in the *Journal of the American Medical Association*, for August 29, 1914.

Johnston and Sherwell published the second paper on the subject, giving it the title White Spot Disease. In this paper reference was made to Westberg's case and to Montgomery's (first) case of white spot disease, exhibited before the American Dermatological Association in 1901, a report of which case was later published in full. The patient who formed the subject of Johnston and Sherwell's article was shown before the New York Dermatological Society in March, 1902, and was reported in *THE JOURNAL* for June, 1902. Sherwell subsequently exhibited another instance of this peculiar condition before the New York Dermatological Society in 1904. By that time a number of dermatoses, characterized by the presence of white spots of one kind or another, were reported in the dermatological literature of America and Europe.

During the past ten years a very substantial literary structure has reared itself upon the foundations of Westberg's and Johnston and Sherwell's papers. A rather careful and thorough perusal of the writings on the subject of white spot disease and allied dermatoses, has given us the impression that the cases deserving to be placed in the same category with those of Westberg and Johnston and Sherwell are not by any means numerous. Highly instructive and interesting contributions to the subject have been rendered by some of the master minds of dermatology, both here and abroad, but of these dissertations, valuable as they are, only a few actually deal with the subject of so-called white spot disease.

As is the case with so many other unclassified dermatoses in which the ætiology is purely conjectural, and in which even the microscopic changes are more or less obscure and difficult of interpretation, the study of white spot disease has led investigators far afield in their attempts to place it into its fitting nosological position with relation to allied cutaneous changes. Thus, in the excellent contributions of Vignolo-Lutati, Riecke, Hazen, Petges and others, we find that these authors evidently considered it necessary, for a thorough presentation of the subject, to digress considerably from the main theme. For they deal not only with white spot disease, *per se*, but also with morphœa guttata and scleroderma circumscriptum, as well as the "card-like scleroderma" of Unna, the "lichen albus" of von Zumbusch, the "lichen planus atrophicus and sclerosus" of Hallopeau, the "dermatitis lichenoides chronica atrophicans" of Csillag, the "neurodermatitis alba" of Kreibich, the "nævus anæmicus" of Voerner, the "multiple keloids with scar-like atrophies" of Jadassohn, the "white, atrophic and scar-like perifollicular spots on the trunk" of Iwanow, the "morphœa with maculæ atrophicæ" of

Duhring, the "circumscribed scleroderma" of Zarubin, and a number of other morbid cutaneous processes of more or less remote relationship to white spot disease (Fig. 1).

Evidently a judicious scheme of elimination would seem desirable in order to clarify the subject, at least as far as our present-day knowledge will permit. To avoid confusion it would appear to be a good plan to omit the polemical discussion of the cutaneous changes which obviously have but little bearing on the subject of white spot disease or *morphœa guttata* or circumscribed scleroderma in any of their varied clinical and pathological manifestations. Interesting as these remotely related disease-processes undoubtedly are, it can hardly be said that their inclusion in a discussion dealing with white spot disease is in any way conducive to a clear understanding of an already involved subject.

A year ago Hazen read a paper before this body, in which he briefly reviewed the modern conceptions regarding some of the above mentioned dermatoses and their relation to each other. Most writers to-day employ the terms white spot disease, *morphœa guttata*, and circumscribed scleroderma interchangeably, in accordance with the views expressed by Montgomery and Ormsby and several other observers after them. Jamieson recently published the report of a case of white spot disease, together with an excellent colored illustration, in the *Ikonographia Dermatologica* (1910, v, p. 199). "There can be no doubt," he avers, "that this is a genuine example of *morphœa guttata*, instances of which have been recorded as white spot disease by American and English authors." It has been shown by several investigators (Vignolo-Lutati, Ormsby, Riecke, Petges and others) that the *lichen planus atrophicus* of Hallopeau and the *lichen albus* of von Zumbusch are one and the same disease. They belong to the *lichen planus* group, and one would hardly expect that the peculiarly distinct clinical features presented by white spot disease or *morphœa guttata* may later become so changed as to assume the appearance of a condition as unlike it as is *lichen planus atrophicus*. Yet such a change did take place in Hazen's case, although in its histological structure it more nearly resembled that of the case recorded by Johnston and Sherwell. As Hazen remarks, his case was probably unique in this respect. An instance such as this makes the problem of classification and elimination a still more complicated one.

If the grouping of the various types were to be based solely upon the laboratory findings in the different recorded instances, there would be almost as many groups as there are case reports;

for the histological structures can be said to clearly resemble each other in but a few instances, even when the clinical appearances seem to be strikingly similar. Presumably, therefore, the microscopic changes have been studied and described in different lesions *during different stages of their development and evolution*; that is, lesions of only a few months' duration, when compared to those which have been present for several years, may have so little in common under the microscope that they may actually appear to be two different disease processes. This would in part account for the many discrepancies in the histological reports of cases which clinically seem to resemble each other very closely, but in which the microscopic findings may be almost contradictory. Another important point in this connection is the great *variability* in the time of evolution of the lesions, not only in different patients, but also in different spots in the same case. Under these conditions it is not surprising that the most diversified histopathological descriptions have come to light. Thus, if we compare some of the more salient histological features in several cases of white spot disease, we are immediately confronted with a striking lack of uniformity in the microscopic findings. For example, the elastic tissue in Juliusberg's case, in Montgomery and Ormsby's first case, and in Hazen's case, was definitely diminished; while in Westberg's, Warde's, Montgomery and Ormsby's second case, and in Riecke's case, there was practically no marked change in the elastica. There was a prominent dilatation of the lymph vessels, especially the sub-epithelial, in the cases of Johnston and Sherwell, Warde, Juliusberg, Montgomery and Ormsby, and Riecke; in Westberg's case, on the other hand, the lymph spaces were narrowed. In most instances the blood vessels in the involved areas were either scant or altogether absent; they were contracted in the cases of Westberg, Warde, and Montgomery and Ormsby; in the cases of Johnston and Sherwell, Juliusberg, and Riecke they were dilated. As to the connective tissue of the corium, in Johnston and Sherwell's and Hazen's cases there was a marked degeneration; in the majority of the cases, however, there is hypertrophy of the collagenous tissue of the corium, the affected areas being usually walled in by inflammatory infiltrates. The epidermis shows the least variable alterations. There is usually thickening of the horny layer, attenuation of the rete Malpighii and obliteration of the papillæ. In one of Sherwell's cases the rete was reduced to four or five layers, and showed hydropic degeneration. The changes in the epidermis are probably secondary to those taking place in the cutis, in the opinion of most observers.

CLINICAL STUDY.

In taking up the subject of white spot disease from its clinical aspect, we are confronted by several questions which deserve consideration.

Which class of cases, from the clinical standpoint, shall we designate white spot disease? What are the characteristic or peculiar features of this dermatosis? May we employ the terms white spot disease, *morphœa guttata* and *scleroderma circumscriptum* interchangeably? What are the clinical relations between white spot disease and several other dermatoses, such as the *lichen albus* of von Zumbusch, the *lichen planus sclerosus* and *atrophicus* of Hallopeau, and the "card-like scleroderma" of Unna? Does white spot disease retain its original peculiar characteristics throughout its entire course and evolution, or is it subject to transitional changes, during which it may assume the clinical characters of an apparently different disease-picture?

To answer these questions in a rational manner it is necessary for us briefly to review some of the more relevant case-reports and descriptive essays bearing on the subject. Such a task has, to a great extent, already been accomplished by Vignolo-Lutati, Montgomery and Ormsby, Riecke, Hoffmann and Juliusberg, Dreuw, Petges and others. These contributions, complete and thorough as they are, nevertheless leave the question of the identity and nosological position of white spot disease an open one. There is no doubt, however, that the reasons for the numerous divergent and contradictory opinions expressed by many able authors in discussing white spot disease lies in the variable clinical and microscopic appearances of the lesions in the different stages of their evolution.

The consensus of opinion among writers is overwhelmingly in favor of recognizing two distinct groups of diseases giving rise to "white spots." The first group comprises white spot disease, *morphœa guttata* or circumscribed *scleroderma*; the second group is represented by *lichen planus sclerosus* and *atrophicus*, a condition conceded to be identical with *lichen albus*. The first group belongs to the *scleroderma* family, the second to the *lichen planus* family. That there are "transitional" cases, such as those described by Riecke, Hazen, Herxheimer and others, is quite evident from the literature. Cases of this type may require further study in the different stages of their evolution, but there is little doubt that *ultimately they will be relegated to one or the other of the two groups mentioned above.*

CASE REPORT.

The patient who forms the subject of our report presented lesions typical of white spot disease; the locality of the eruption—the penis and scrotum—is probably a very unusual one, for we have not encountered case-reports describing lesions on the genitalia.

R. R., a married man, 43 years of age; born in England; carpenter by occupation; he entered Dr. Fordyce's clinic in November, 1913.

FAMILY HISTORY, negative.

PAST HISTORY. The past history, previous to the development of the white spots, is negative. Four months before coming under our observation the patient noticed four small, white lesions—two on the penis and two on the scrotum. According to his statement, they all developed at the same time, but he is unable to say how long a time was required for their evolution. He states that the character and the size of the lesions have remained the same since he first observed them. He denies any subjective symptoms, with the exception of very slight itching.

Syphilis and tuberculosis are excluded.

PRESENT CONDITION (November, 1913). The patient is a tall, thin man of a distinctly neurotic type; a general physical examination revealed nothing of interest.

The entire cutaneous surface, including the visible mucous membranes, was normal, with the exception of the lesions about to be described.

The eruption for which the patient consulted us consisted of four lesions, two of which were on the dorsal surface of the penis and two on the right side of the anterior surface of the scrotum (Fig. 2). They were all of about the same size—roughly speaking, about $\frac{1}{2}$ millimetre in diameter. The upper penile lesion was situated at about the middle of the shaft of the organ, while the lower was about an inch nearer the glans and was a little larger than the other three spots. There was a marked disc-like configuration, with a well-defined, slightly irregular or crenated border. The penile lesions appeared as though they were imbedded in the skin, like mosaic; this appearance was less marked in the scrotal lesions. Palpation revealed slightly perceptible infiltration, but there was no distinct sense of resistance, nor hardness, nor card-like consistence. The margin was, perhaps, very slightly elevated above the surrounding

skin; the centre appeared to be slightly depressed, and from a clinical standpoint gave the impression of being atrophic. The centre was smooth and lustrous—there was no wrinkling or scaliness.

The white color was the most striking feature. The border of each lesion was an opaque, glistening white, resembling porcelain, and was very narrow. The interior of the spot was semi-translucent and bluish-white, resembling mother-of-pearl. This color appeared to be produced by the translucency, for although the central part of the lesion was white, the color in the underlying tissue seemed to blend with the overlying whiteness to produce the pearly appearance.

The upper penile lesion presented a very faint violaceous rim or halo. This feature was not noted in connection with the other spots. The lesions on the scrotum were not quite as prominent and well-marked as those on the penis. There were no subjective symptoms.

The patient was not seen again until the latter part of May, 1914, after an interval of six months, during which time no treatment had been applied. There was no change in the clinical appearance of the lesions.

The patient was exhibited before the New York Dermatological Society at the December, 1913, meeting.

This case presents several unique features, clinically. The appearance of the lesions on the genitalia, the fact that there are but four spots altogether, that they are widely separated from each other, and that no other part of the integument is affected—all these are unusual manifestations of the affection. In addition, the occurrence of the disorder in the male sex is in itself also uncommon.

Taken individually, the lesions may be said to be typical. They are of a striking white color, sharply circumscribed and imbedded in the skin; their surface is smooth and lustrous; in one of the spots a distinct areola was seen at the periphery. There is nothing to remind one of lichen planus, possibly excepting the fact that the efflorescence is located on an area of predilection for that disease.

Presumably, new lesions will make their appearance as time goes on.

If we may be permitted to regard the case herein reported as a typical example of white spot disease, it enables us to formulate the following clinical characteristics of that condition. The essential lesion consists of a discrete, sharply circumscribed, circular or oval, smooth, glistening plaque. Its size is variable: in our case,

the lesions are about the size of a split pea. It appears to be *imbedded into the skin* like a mosaic; in its immediate vicinity the integument is perfectly normal. The color is always white, but it varies in the degree of whiteness, if one may use the expression. In our case the periphery of the lesion shows a snow-white color, while the centre looks more like mother-of-pearl. One of the lesions presented a faint violaceous band, forming the periphery of the plaque. The white color of these lesions forms a striking contrast to the ordinary flesh tint of the Caucasian skin, and is still more forcibly brought out when the lesion is situated on skin which possesses more than the ordinary amount of pigment, as occurred in our case. The color has been described as dead-white, snow-white, mother-of-pearl, porcelain-white, chalk-white, ivory, asbestos, alabaster, etc. The intensity of the white color is greatly enhanced by the abrupt and sharply margined edge of the lesion, contrasted to the surrounding skin. The smooth, glistening surface of the lesion is another factor making for the sharp contrast to its surroundings.

On palpation, a barely perceptible resistance can be made out. There is a very slight elevation of the border, which can be more readily seen than felt. The interior of the plaque is slightly depressed, giving it the appearance of a shallow saucer, in the centre of which there is a faint suggestion of atrophy; here the color is more bluish-white than at the periphery. The disease is essentially chronic in its course.

The cases which exhibit lesions clinically analogous to the ones above described are those of Westberg, Unna, Johnston and Sherwell, Sherwell, Montgomery and Ormsby, Hoffmann and Juliusberg, Herxheimer, Perry, Warde, Macleod, Jamieson, Riecke, Petges, Hazen, Dreuw, and Kretzmer. It is probable, also, that certain cases of scleroderma in patches and bands, such as those described by Unna, Zarubin, Duhring and others, should be included in this group, although, judging from the clinical descriptions alone, they seem far removed from the picture presented by white spot disease, despite the fact that they bear certain points of resemblance to it.

To be excluded from the category of white spot disease as a clinical conception are the cases of Iwanow and Jadassohn, von Zumbusch, Hallopeau, Voerner, Csillag, Hoffmann, Vignolo-Lutati, Kreibich and Stoewers. They are not to be confounded with white spot disease, any more than they should be classed with circumscribed scleroderma or morphœa guttata. Some of them belong to the lichen planus family (lichen albus of von Zumbusch, lichen

planus morphœicus of Stowers, dermatitis lichenoides chronica atrophicans of Csillag, lichen planus sclerosus and atrophicus of Hallopeau); others seem to bear no relation to either scleroderma or lichen planus, as for example the case of Iwanow, Voerner's nævus anæmicus, Kreibich's neurodermatitis alba and others.

In the following brief descriptions of the efflorescences in some of the better-defined cases of white spot disease, it will be readily seen how varied is the clinical picture which presents itself in the different cases.

In WESTBERG'S case, a girl of 11, the lesions were of 1½ years' duration, situated mainly upon the chest. They were isolated, disseminated, barley-corn to bean sized, round and oval plaques, most of them following the lines of cleavage of the skin. The color was chalk-white, the surface smooth, like "playing-card pasteboard" (as Unna described in his "kartenblattaehnliche Sklerodermie"). When the skin was stretched, one barely felt a slight elevation of the lesions; with the skin relaxed, nothing could be discerned with the palpating finger. There was no indication of atrophy. The growth of the lesions was an extremely slow one. The plaques seemed as though they were imbedded in the skin and were movable with the surrounding integument.

In JOHNSTON AND SHERWELL'S patient, a female of 26, the lesions began thirteen years ago. Most of them were situated upon the chest; in addition to the white spots, there were also some striate atrophic spots at the base of the neck and over the shoulders. The lesions were slightly elevated above the niveau and were smooth; the smallest lesions were about the size of the head of a white pin. The outline was sharp and irregular. There was no sign of an inflammatory areola. The color was the dead-white of snow. After a certain lapse of time, some of the lesions had undergone involution; a thin scale formed, leaving an atrophic spot in place of the white spot; the atrophy resembled that following other atrophying diseases.

In a case, a female of 26, presented before the New York Dermatological Society by SHERWELL, the disease was of two years' duration. The lesions were situated on the upper part of the chest and over the shoulder-blades. They had attained to the size of a ten-cent piece, were discrete and of a dull, dead-white color. There was no tendency to coalescence.

MACLEOD'S two cases occurred in a mother and daughter. The mother presented a large number of small white spots, from a pin-head to a spit pea in size, and situated on the neck and chest. The lesions on the neck were white or pearly in color; in shape some were circular, others angular or irregular; some were surrounded by a red, inflammatory areola. According to Macleod, they suggested small spots of morphœa guttata, such as Duhring described in his case. The daughter, a child eleven years old, presented numerous white spots on the abdomen and some on the chest. They were irregular in shape, but did not resemble morphœa. The lesions were not palpable and there was no sign of an inflammatory areola; atrophy was absent.

In DUHRING'S case, a female of 55, there were typical lesions of morphœa, coexisting with atrophic areas on the neck, which were sharply defined, somewhat depressed, round, whitish or pearl colored, and about the size of a pea; some similar lesions were present on the forearms as well.

In UNNA'S cases, an old woman and a young girl, the white spots varied in size from a lentil to a six-pence. They were somewhat depressed below the niveau and situated chiefly on the breast and shoulders. The spots were bluish-white, mother-of-pearl, or chalk-white, and resembled a piece of cardboard im-

bedded in the skin. Some of the spots showed a narrow bluish zone, somewhat elevated from the underlying tissue. There was spontaneous healing with a resultant scar, like that of a senile atrophy.

ZARUBIN'S case, a man of 44, presented groups of pinhead to pea sized, smooth, glistening, circumscribed, white spots, situated on the chest, neck and abdomen, and showing a marked tendency to confluence. The surface of the lesions appeared thinned and atrophic. Some of them showed fine capillaries and follicular depressions. The lesions were disposed in the form of bands or stripes. Zarubin looked upon the case as one of scleroderma circumscriptum, and stated that it closely resembled Unna's "cardlike scleroderma."

MONTGOMERY AND ORMSBY'S first patient, a female of 40, presented lesions on the shoulders, neck, chest and back, with a few on the abdomen. They were mostly split-pea sized, oval, the largest being three-fourths of an inch by a half inch in size; some of the large patches were formed by the confluence of smaller lesions. The color of most of the spots was snow-white; a few smaller lesions had a yellowish or brownish tint. Most of the smaller lesions were firm to the touch, with a "slight cushiony feel." In the larger spots, the surface was dry, glistening and wrinkled, some of them having small depressions filled with yellowish plugs, which were easily removable. Elevation of the lesions was slight or altogether absent. They were sharply defined, a few of them being bounded by a narrow, faint, hyperæmic areola. About a year later, half the lesions had become distinctly atrophic and very slightly depressed below the level of the surrounding skin. At a still later date, additional spots had become atrophic. Others were surrounded by a distinct purplish and hyperæmic border, showing numerous telangiectases. These resembled patches of morphœa.

In the second case, a female of 49, of MONTGOMERY AND ORMSBY, the white spots appeared on the shoulders, chest and back; they varied in size from a pinhead to a small split pea; there was little tendency to coalescence, excepting in three patches on the back, which were formed by the junction of smaller lesions. The lesions were densely white, sharply outlined, some of them having a narrow, peripheral, brownish-red band of pigmentation. With the exception of a small patch on the back, there were no wrinkled surfaces, nor the punctate depressions and yellowish plugs noted in the first patient. On the left leg of this patient there was a broad band of typical scleroderma.

JAMIESON'S case, a female of 39, diagnosed as morphœa guttata, presented typical white spot lesions over the clavicles and back of the neck. They were ivory-white, smooth, lustrous, and surrounded by a narrow areola, rosy-pink or violet in color. They were about the size of a lentil.

PERRY demonstrated a case before the London Dermatological Society (1897), in a female of 33; the lesions were on the chest and shoulders and on the neck, and consisted of small, round, white, indurated spots, with raised, pigmented edges. Within the white interior there were dark, widened, follicular plugs. (In this case, Colcott Fox was led to make a diagnosis of lichen planus atrophicus, on account of the presence of the follicular plugs.)

A case was reported by HOFFMANN AND JULIUSBERG, in a man of 33, who presented about forty slightly raised, round and oval spots on the neck, chest and back; they were snow-white in color and about the size of a lentil. Some of them were surrounded by a bluish peripheral zone. Nearly all showed a hair in the centre. Their duration was four years. (Juliusberg subsequently published a very complete study of this case.)

HERXHEIMER presented a man of 22 before the 10th Congress of the German Dermatological Association. The disease was of about five years' duration. The patient had several patches of deep-seated, diffuse sclerodermatous infiltrates on the left arm and the trunk. On the back of the neck there were groups of split-pea sized, glistening, mother-of-pearl spots, some of which had coalesced to form larger patches. There was a slight infiltration, the spots being somewhat de-

pressed below the surface of the normal skin. Some of the lesions showed a narrow, bluish peripheral band. A few of them appeared to be perifollicular.

WARDE reported a case in a woman of 31, in whom the affection appeared on the trunk, neck, back and extremities. In the first stage, the lesions were barley to bean sized, raised white papules, of round and oval shape, appearing to be imbedded in the skin. On pressure, there was a moderate sense of resistance. On the chest, there were some coalescing perifollicular papules. In the second stage, there were ringed lesions, formed by the central depression of preceding papules; they presented narrow, deep-red zones at the periphery, containing dilated capillaries. The centres were white. The third stage presented small, oval and rounded plaques, imbedded in the skin, reddish in color and somewhat indurated.

In RIECKE's case, a woman of 50, there were a large number of lesions on the abdomen and thighs, which had been present since ten years. Some of those on the trunk had coalesced to form palm-sized patches. The individual lesions were barley to lentil-sized spots, sharply circumscribed, round, oval and polygonal in shape. They were set into the integument like mosaic, were mostly level with the skin, impalpable, gleaming white and lustrous. Some showed a small depression in the centre. A few were slightly raised above the level of the normal skin.

In HAZEN's case, a female of 32, the lesions were of one year's duration. There were several groups of snow-white efflorescences on the neck, consisting of lesions varying from 1 to 5 mm. in diameter. They were sharply defined, angular, and had no central depressions. There was no palpable infiltration; in fact, the lesions seemed to be softer than the normal skin in their neighborhood. The surface was dry, thin and wrinkled. On the trunk, the lesions were slightly depressed, white, without gloss, resembling scar tissue, but they also were softer than the surrounding skin. Hazen states that when he first saw this patient, her lesions were typical or *morphœa guttata*, but that later they resembled the appearance seen in cases of *lichen planus atrophicus*.

DREUW's case, a female of 49, who had been treated for seven years for *kraurosis vulvæ*, had an eruption of white spots on the upper portion of the chest and at the base of the neck, and in the middle of the back; the patches were about the size of a two-franc piece. These resulted from the coalescence of small spots, varying in size from a pinhead to a pea, the more recent ones consisting of similar spots, more distinctly separated. The primary spots were round or oval, white, scarcely raised, their centres being slightly depressed, with blackish, horny scales, which could be easily detached by scratching, and probably corresponded to the follicular orifices. They were well circumscribed.

PETGES' case, a female of 25, presented several types of lesions. They appeared over the clavicles and on the chest and between the scapulæ. The eruption consisted of lenticular and nummular lesions, of the dimension of a 20 centime piece, of a brilliant, porcelain-white color, dry and resistant to the touch. The lesions began as brownish, follicular, corneous points, which gradually increased in size, becoming white. They then formed a white macule, pinhead in size, round, with a slightly elevated border and depressed centre, giving to the touch a sensation of roughness, dryness and hardness. The glistening, porcelain-white color was the most striking characteristic feature. Around the lesions there was a violaceous, rose-colored halo, visible to the naked eye. The surrounding skin was normal in color and texture. At a more advanced stage, the spots became lentil sized, round or oval, sometimes elongated, with sharp, regular margins, which were surrounded by a slightly wrinkled border of a lilac-rose color; in the still older lesions the halo assumed a brownish hue. The margins were slightly elevated. The centre of the lesion was depressed and cup-shaped, porcelain-white in color, with several perifollicular, corneous points of a darker color. With a lens, one could see fine, atrophic hairs in the centre of some of

the horny plugs. In some areas, the lesions showed a tendency toward confluence, but nowhere was there actual coalescence. Some of the lesions, having undergone involution, left dull-white, slightly atrophic and depressed, smooth macules, which were soft and free of hair.

Finally, two cases have been recently recorded by KRETZMER. The first was in a man of 35, in whom the lesions were of five months' duration. At the base of the neck there were from eight to ten white, oval spots, varying in size from a lentil to a bean, and sharply circumscribed. The surface was thin and finely wrinkled. There was no pigmentation around the edges, nor any sign of an areola. Examination a month later showed that the spots had increased in size and in number, practically encircling the base of the neck. Within some of the plaques, there were some reddened and slightly scaling spots, somewhat resembling lupus erythematosus. There was very intense pruritus.

The second patient was a man of 60, who had had the disorder for twenty years. The spots began over the left zygomatic region and were said to have been preceded by a bulla. Other spots developed on the neck, without being preceded by bullæ. The plaque over the zygoma was white, indurated, somewhat irregular in shape, about the size of a ten-penny piece; it possessed a red-dish areola. A similar, smaller patch, scarlike and depressed, was present on the neck. On the left side of the face and neck there were six hard, lentil-sized white spots, one of which had a distinct bluish-red areola. Behind the left ear, there was an elongated, indurated lesion of similar appearance. Subjective symptoms had been absent until recently, when the patient complained of a burning sensation in some of the spots.

The foregoing case-reports have been published under a variety of descriptive titles, to wit: circumscribed scleroderma, *morphœa guttata*, white spot disease, "kartenblattaehnliche Sklerodermie," *morphœa* with maculæ atrophicæ and *morphœa guttata follicularis*.

Assuming, from a purely clinical standpoint, that the above-described efflorescences represent characteristic features of white spot disease, and that their great variety is merely an expression of the various stages of their evolution (an assumption which we deem well-founded), we are enabled to present a composite picture of the affection, possessing the following salient features:

White spot disease occurs mostly in females, especially in those of a neurotic temperament (according to Petges, in those with a tuberculous taint). It may occur in childhood or in early and late adult life. Most of the recorded cases were in the third and fourth decade. The disease is essentially chronic in its course, the lesions making their appearance insidiously and developing slowly. Aside from the moderate pruritus, especially in the beginning, subjective symptoms are rare. The areas of predilection are at the base of the neck, in front and behind, the upper portion of the chest and back, but the lesions may appear on the extremities, various portions of the trunk, on the genitals, etc.

The essential lesion is a small white spot. The color may be snow-white, ivory-white, mother-of-pearl, bluish-white, etc. The lesions may vary in size from a large pin-head to a dime. They

may be isolated, sparse and widely scattered, or they may be numerous, grouped and confluent. The surface may be smooth or wrinkled, glistening or dull, depressed or slightly elevated, or level with the surrounding skin. There may be a raised edge and a (relatively or actually) depressed centre. The entire surface of the lesion may be uniform in color and consistence, or there may be a peripheral band which is bluish, reddish or lilac in color. Sometimes fine blood vessels may obtain at the edges. The individual spots are usually round, oval or polygonal in shape, sharply circumscribed, and having the appearance of being imbedded in the skin like a mosaic. The integument surrounding the lesion is normal. The spots may or may not be peri-follicular; some of them may be pierced by a hair, or by several hairs; or they may contain one or more horny plugs.

To the palpating finger the lesions may be imperceptible, or they may impart a sense of resistance (induration), or they may feel exactly like the normal skin, or appear to be even softer than the normal skin.

In some of the cases the lesions were somewhat scaly. In others the superficial portion of the entire lesion could be picked out of the skin with the finger nail, disclosing a reddish-white bed beneath, sometimes showing fine blood vessels. Vigorous rubbing would detach a scale in certain instances, leaving the deeper portion intact. Atrophy appeared to be a prominent feature in some of the cases. In others, nothing suggestive of atrophy could be discerned.

The significance of one or more follicular depressions, follicular plugs and attenuated hairs, described as being observed in some of the above-recorded cases, is still a matter for speculation as regards their relation to the lesions of white spot disease. They are mentioned by Zarubin, Montgomery and Ormsby (first case), Herxheimer, Hoffmann and Juliusberg, Riecke, Dreuw and Petges. The last author clearly shows that "their presence is not incompatible with the diagnosis of white spot disease." Juliusberg also calls attention to this peculiarity in some of the cases, and suggests the name *morphœa guttata follicularis* for them, to differentiate them from the non-follicular types.

The views and contentions of various authors, especially those who have written on the subject more recently, and who therefore have had the opportunity to profit by the work of their predecessors, both here and abroad, are interesting and well worth reviewing.

In their summary, MONTGOMERY AND ORMSBY have the following to say, in connection with the clinical aspect of the dermatosis: "Of the ten cases here assem-

bled, all occurred in women or girls. Two of the women were neurotic. Of the other patients, three are reported in good health; while of the remaining five no mention is made of the systemic condition. In seven patients, the lesions were limited to, or chiefly located on the neck, shoulders and the upper parts of the back and chest. In the other three, the chest or breasts are named as sites of the disorder. In one of our patients there were a few lesions also on the abdomen, and in Duhring's patient there were also lesions of this type on the arm. In one case (one of those reported by Macleod) the lesions appeared upon the abdomen and chest, while in one of Unna's cases the regions involved are not mentioned further than that the lesion for examination was taken from the breast. In Westberg's case the lesions appeared first on the breast and spread to other parts of the trunk.

"Aside from the location, the characteristic features of white spot disease are: the dense whiteness of the lesions; their sharp outline, giving the appearance of their being let into the normal skin; their small size and tendency to remain discrete even when closely grouped; the absence of distinct elevation and of the colored border characteristic of morphœa. The clinical picture is certainly not that generally seen in morphœa.

"On the other hand, in our first case some of the original lesions after a few years were transformed into typical areas of morphœa. This case was studied by Johnston in its earlier stages, and in reporting his own case he states that the two are identical clinically. In our second case the white spots on the shoulders were accompanied from the beginning by a typical band of scleroderma on the leg. In one of Macleod's cases some of the lesions were very much like those of morphœa, and in Duhring's case the white spots were accompanied by typical lesions of morphœa and by striate and macular atrophy. Finally, the last atrophic stage of white spot disease apparently differs in no way from the same stage of morphœa, or from macular atrophy of the skin, except that the scars are small and do not coalesce.

"It cannot be denied that this series of cases of white spot disease presents a fairly distinct clinical type, differing decidedly from the usual forms of morphœa. In several cases, however, its close relation to the last-named disorder is apparent, while of the six cases studied histologically, four clearly belong to the scleroderma group, while the other two show changes that have been recognized, though not commonly, in early lesions of scleroderma.

"It would seem, therefore, that the evidence would not warrant the classifying of this group as a new disease; it should be considered rather an unusual type of morphœa or localized scleroderma."

Dreuw's paper, entitled "White Spot Disease or Sclerodermia Circumscripta?" is devoted mainly to a description of the minute changes in the epidermis of the lesions which he studied—the alterations in the corium being identical with those found by Juliusberg and Riecke in their cases. "We are dealing," he says, "with three cases (Dreuw, Juliusberg, Riecke) which are microscopically, clinically and histologically identical. These show minor variations as to their localization and other negligible differences, but on the whole they are instances of the same disease. If we compare these cases of 'white spot disease' with Unna's description of sclerodermia circumscripta, the diagnosis stands confirmed. It is not white spot disease in the narrow sense, but rather in a broad sense, in so far that white spots exist—namely, the white spots characteristic of sclerodermia circumscripta." Dreuw collected the more important cases of white spot disease and tabulated them. From this table it will be seen, he states, that a number of cases of circumscribed scleroderma have been designated white spot disease—an observation which had been pointed out by Juliusberg, Herxheimer, Riecke and others. As undoubted instances of the dermatosis, he considers to be the cases of Unna, Riecke, Juliusberg, and Dreuw, and as parallel cases he names those of Hoffmann and Juliusberg, Zarubin, Warde, Montgomery and Ormsby.

as well as those of Macleod, Sherwell, and Herxheimer, the last three of which were not examined histologically. (Jamieson's case, in which no biopsy was made, also belongs here.) In Dreuw's opinion, Westberg's case should certainly be excluded from the circumscribed scleroderma group, and he doubts whether it is proper to include in it the case of Johnston and Sherwell, much as the latter resembles scleroderma circumscriptum. Like most authors on the subject, Dreuw believes that Westberg's case differs from all the other recorded instances.

In his summary, Dreuw calls attention to the following points: Scleroderma circumscriptum may occur at any age, and affects females chiefly. The sites of predilection are the neck, chest, back and abdomen; the face and extremities are rarely affected. The reddish or pigmented zone around the white spots may be present, but is not a *conditio sine qua non*; for in one case (Herxheimer's) both forms obtained—white spots with and without an areola. Dilatation of the blood vessels in the lesions is common, but may be absent, as in his own case. Subjectively, pruritus may or may not be present. Confluence of individual lesions may occur, forming a card-like and parchment-like central area, surrounded, so to speak, by satellite lesions. Sometimes a single lesion may exist, or both forms may obtain in the same patient. Mast cells within the lesion are absent or rarely present, but in the apparently normal surrounding skin he was able to demonstrate the presence of many transitional forms of mast cells derived from connective tissue cells. As to the duration of the disease, it has varied from one to thirteen years; at all events, it is an exceedingly chronic process.

The surface of the lesion is smooth, perhaps moderately depressed, with here and there some scaling, due to the thickened stratum corneum. The size of the lesions is pin head to lentil size, perhaps larger. The color is white. The consistence is dense. The individual lesions are sharply circumscribed.

"Taking all of these characteristic features into consideration, it may not be unwise to designate such cases, not as 'white spot disease,' but what they actually represent—namely, scleroderma circumscripta."

PERGES remarks that "after a careful perusal of the literature, and after studying personally a very good example of the disease (white spot), we are of the opinion that morphœa guttata (kartenblattähnliche Sklerodermie of Unna) should be classed with scleroderma; that it should be separated and differentiated from lichen planus sclerosus; and that it is identical with the white spot disease of the American school, or at least with most of the cases described under this name. Circumscribed morphœa, or morphœa guttata, as it is called, was described by Unna in 1894, and the following characters were assigned to it: the lesions consist of white spots, round or oval, of the dimensions of a pinhead to a lentil, circumscribed, isolated or confluent," etc. Further on, in discussing differential diagnosis, he says: "Theoretically, the diagnosis rests between two clinical types: lichen planus atrophicus and scleroderma in plaques. A careful examination of the patient easily eliminates lichen planus. The lesions affect a patient who is not nervous and there is no possibility of an emotional cause as an ætiological factor (as in lichen planus). There is not the slightest amount of itching. The mucous membranes are normal. There is not, nor was there, even a single papule suggestive of lichen planus. On the other hand, everything points to scleroderma: the limitation of the lesions, the tendency to primary sclerosis, the early atrophy, the induration resembling the 'kartenblattähnliche Sklerodermie' of Unna, their startling white color, and finally the violaceous border, are all characteristic of superficial scleroderma. In addition, we have the localization on the shoulders and the chest, in the form of numerous lenticular patches of opaline whiteness—in a word, a case of morphœa guttata. . . . The histological examination of my case permits of its identification. It is histologically similar to those of Unna, and is far removed from lichen planus, of which disease it has no similar characteristics, with the exception of the hyper-

keratosis. There is no œdema around the lesions nor in the lesions; no cellular infiltrate in their vicinity, nor the mass of cells which forms such a striking picture in lichen planus, with the exception of a few perifollicular and periglandular masses of cells. To the contrary, we see a hypertrophy of the connective tissue of the derma, with atresia of the vessels and compression of the glands and follicles—striking features of scleroderma. That the hyperkeratosis and the horny plugs do not belong to scleroderma may be used as an objection; and that this is the exception in scleroderma must be admitted; but we have seen it in cases of true scleroderma in the pathological collection of Dubreuilh." Here follows a description of several of such cases, with their histological findings. Speaking of the cases of Westberg, Johnston and Sherwell, Montgomery and Ormsby, etc., Petges believes that there is little doubt that clinically and histologically we are dealing with a distinct type of morphœa, belonging under the head of circumscribed scleroderma, and he shares the views of Montgomery and Ormsby in their belief that most cases of white spot disease are in reality morphœa guttata, a variety of scleroderma, but not in themselves forming a clinical entity. The same view is held also by Juliusberg, and to a certain extent by Riecke. The latter, however, basing his contention chiefly upon a case which he had studied, believes that certain cases may belong to the "sclerodermic lichen planus type."

Petges submits numerous differential diagnostic points between morphœa guttata and lichen planus sclerosus and atrophicus. He compares the morphœa guttata cases with the lichen cases of Darier, Brocq and Hallopeau. His statements are so clear cut and well defined that their repetition here would be superfluous. Concluding his paper, Petges remarks that the horny plugs, punctiform depressions and hyperkeratosis—peculiarities of sclerotic lichen planus—are not incompatible with the diagnosis of circumscribed scleroderma or morphœa guttata. Incidentally, he offers a number of suggestions in support of his view that the ætiology of morphœa guttata bears a close relation to tuberculosis—the "inflammatory tuberculosis of the Poncet type."

In his summary, KRETZNER makes the following remarks: "We are dealing with two cases which, in all probability, correspond to the symptom-complex described by Unna as 'card-like scleroderma,' and which must be regarded as being identical with nearly all cases recorded under the head of 'white spot disease.' The name white spot disease should be employed tentatively and with caution. It may be wiser to designate these cases as morphœa or scleroderma guttata, or punctata, or maculosa. For the perifollicular cases, Juliusberg has suggested the name morphœa guttata follicularis. Much further study will be required to determine whether we are justified in separating these cases from scleroderma and in giving them an individual name. Not only must the histological structure be considered, but also the clinical course, the prognosis, etc., in each case."

It may be gathered from the preceding paragraphs that the description of the clinical entity "white spot disease" entails the consideration of a rather formidable number of morphologically variant lesions, very much as is the case when one renders a description of the clinical entity "syphilis." No single case of white spot disease can, of course, be conceived to possess the divers types of efflorescences recorded above; and, to preserve the analogy, the same may be said of a case of syphilis, with respect to the multiformity and variety of its lesions. This will be considered as being a rather broad and comprehensive view of the subject under consideration;

and yet, with the information which we have gleaned from the works of our American and European confrères, coupled with a careful and critical study of our own case, we are led to believe that such a broad view is not altogether untenable.

HISTOPATHOLOGY.

Both of the penile lesions were excised for the purpose of histopathological study; they were ablated in their entirety. The upper lesion was removed in November, 1913, and the lower one in May, 1914. The first piece of tissue was fixed in Zenker's fluid and stained with hæmatoxylin and eosin and Weigert's elastic tissue stain. The second piece of tissue was fixed in Müller-formol solution and stained the same as the earlier sections.

FIRST BIOPSY.

(Fig. 3.)

The central part of the lesion, represented microscopically by a slight depression, shows a general hypertrophy of the epidermis with a central depression or dell. The interpapillary pegs have united to form a broad plate.

The horny layer and the granular layer are thicker here than in any other portion of the section. The rete mucosum is also increased in thickness; the cells stain poorly and the prickles are indistinct; a number of the cells have lost their nuclei.

The basal layer is irregular, vacuolated, and is not sharply differentiated from the underlying cutis.

Derma. In the centre of the lesion the derma is occupied by a somewhat triangular-shaped area of small round cell infiltration, with the base of the triangle close to the epidermis and its apex situated in the lowermost portion of the reticular layer. This infiltration consists for the most part of lymphocytes with plasma cells and fibroblasts scattered throughout the area. Where the infiltration is most dense, collagenous tissue is practically absent. There has been an increase in the number of capillaries, but most of the vessels have been occluded by endothelial proliferation and by the compression exerted by the cellular infiltration. In the upper one-fourth of the area of infiltration, namely, at the base of the triangle, immediately beneath the epidermis, and extending through the entire width of the infiltrated area, is a zone of colliquative degeneration or necrosis. Here the tissue elements are no longer discernible. In

a few sections a large subepidermic cavity was noted in the degenerated area. This was occupied by a homogeneous mass containing a few cells, and reminded us of a similar condition found in Johnston and Sherwell's case.

At the margins of the lesion, corresponding to the opaque white border of the clinical white spot, the epidermis presents very few alterations. The horny layer is practically normal. The granular layer shows a diminution in the number of cells and a reduction in the amount of granular material. The rete Malpighii presents some intracellular œdema. The majority of the pegs have been flattened out. The outline of the papillæ have been altered to correspond with the epidermic changes. The papillary layer shows a condensation with here and there vacuoles and small subepidermic spaces. In this area there are a few scattered lymphocytes, plasma cells and chromatophores. In the reticular layer the collagenous bundles are composed of very coarse fibres, separated here and there by œdema. There are a few circumscribed areas of round-celled infiltration closely limited to degenerated and occluded vessels.

The only appendages noted were a few coil glands which appeared to be dilated and were surrounded by a moderate round-cell infiltration.

SECOND BIOPSY.

(Fig. 4.)

The epidermic changes consist of an entire flattening out of the interpapillary pegs. The horny layer, the granular layer and the rete Malpighii appear normal.

Corium. There is a distinct fibrosis (hyperplasia) in the upper two-thirds of the cutis. The tissue is dense and stains deeply with eosin. Here we find large, coarse, wavy fibres. In the upper corium the blood vessels are reduced in number and size—the endothelium is prominent. There are a few areas of moderate perivascular round cell infiltration. In the rest of the corium the only cells found are fibroblasts. In the lower third of the corium the collagenous tissue consists of a fine network of delicate fibrils, producing the appearance of areolar tissue.

Elastic tissue is present directly under the epidermis. Then there is a narrow zone extending through the lesion where the elastic tissue is either absent or badly fragmented. Lower down it again appears, and, with the exception of some fragmentation, is practically normal.

RÉSUMÉ. The disease apparently began as an inflammation with

a perivascular infiltration of small round cells, œdema, etc. These areas then united to form a diffuse infiltration in the centre of the lesion, with a few outlying circumscribed areas around the vessels. The inflammation apparently was so intense as to produce degenerative changes in the connective tissue of the upper corium in the centre of the lesion.

Sections made from the tissue removed six months later show a disappearance of the inflammatory infiltration with hypertrophy of collagen, diminution of blood vessels, loss of elastic tissue and a flattening out of the interpapillary pegs. We hope to obtain another piece of tissue at the end of a year or two, when it will be instructive to study a still later, perhaps the terminal stage of this peculiar and interesting malady.

Before giving conclusions or comparing our case histologically with other recorded cases of white spot disease, we desire to briefly review the histological findings as found in the literature.

SYNOPSIS OF THE HISTOLOGY OF RECORDED CASES OF WHITE SPOT DISEASE.

UNNA studied two cases of what he called "card-like scleroderma," in which the lesions clinically were white and resistant to the palpating finger. In one case the lesions were of very recent development on the breast of an old woman. In the other case the lesions were of several months' duration, and were situated on the shoulders and back of a young girl.

In the recent lesion there was a marked hyperkeratosis at the expense of the prickle-cell layer, but no epithelial aftergrowth, a thinning of the epidermis as a whole, dell formation, and a flattening out of the interpapillary pegs. There were many subepithelial spaces. In the corium there was a sharply circumscribed lesion occupying the papillary layer and the upper part of the reticular layer. In the lesion proper there was a dilatation of capillaries and lymph spaces. There were cellular collections in the lesion proper and around its margin, which were most numerous in the neighborhood of the blood vessels. The infiltration consisted mostly of fibroblasts, but there were also numerous small round cells. In these areas the elastic tissue had disappeared and the connective tissue was reduced to fine bundles. Elsewhere in the lesion the elastic fibres were separated and the collagenous tissue was split up into fine fibrils. In other words, there was inflammation, with loss of elastic tissue and collagen, a cellular infiltrate, œdema, atrophy of epidermis and hyperkeratosis.

The older lesion was found to occupy the same position in relation to the corium. The cellular infiltrate has, for the most part, vanished. The vessels are narrowed and many of them have disappeared. The same may be said of the lymph spaces. There is a marked hypertrophy of collagen and a loss or atrophy of elastic tissue. The epithelium shows further regressive changes. It is more atrophic, the interpapillary pegs are completely lost, the granular layer is either very much reduced or completely absent, indicating an arrest of cornification, but the horny layer is still thickened. Small spaces between the epidermis and derma still persist.

WESTBERG reports a case of a child with white spots that had been present for one and a half years. There was no sharp demarcation between diseased

and normal tissue. The epidermis was not markedly altered. There was no dell formation. The rete pegs were nearly normal. The most marked feature was the hypertrophy of collagen. Westberg states that beyond the compression of the blood vessels, they were otherwise unaltered. He also avers that there was no sign of inflammation, although he admits the presence of numerous mast cells. As pointed out by Montgomery and Ormsby, however, the microphotographs show collections of cells around the vessels. The presence of this cellular infiltrate together with the mast cells would seem to confirm Montgomery and Ormsby's opinion relative to the possibility of a chronic inflammatory process. It should be stated that Westberg considered these cell collections to be accumulations of normal connective-tissue nuclei pressed together about the vessels. The elastic tissue was normal, but more or less displaced.

JOHNSTON AND SHERWELL made a histological examination in a case of white spot disease of thirteen years' duration, occurring in a woman of 26 years. The changes occurred chiefly in the papillary layer and the upper part of the reticular layer, and, according to the authors, consisted of a pure degeneration. The process is most marked in the centre of the lesion, but there are areas of degeneration throughout the lesion. Where the degeneration is most marked collagen has completely disappeared, its place being occupied by a granular material which has lost the characteristic acidophilic staining properties. The elastic tissue is broken up into short fibres or granules. The elastic network in the papillae has completely disappeared where the process is most advanced. Some of the vessels in the papillary layer were present, but dilated and with swollen endothelium. An irregular and slight lymphocytic infiltration occurred about and independent of the vessels, and swollen, proliferated fibroblasts were scattered throughout the section. The interpapillary projections had disappeared in the areas of most complete degeneration. The epithelial changes were secondary—the rete was composed of four or five layers of cells, and showed hydropic degeneration. The granular layer was either absent or greatly reduced. The horny layer was slightly increased in thickness. There was a large space between the epidermis and the degenerated area in the derma, which was filled with a granular material with an occasional leucocyte. This the authors are inclined to believe is an artefact. Johnston and Sherwell do not lay much stress upon the cellular infiltration, and regard the process as similar to that occurring in symmetrical atrophy of the skin.

MONTGOMERY AND ORMSBY studied the tissue of two cases of white spot disease. The first case was a woman of 40, who had had the eruption for one year. Two pieces of tissue were obtained; one a small, supposedly recent lesion in its entirety; the other piece was taken from the advancing margin of a large, presumably old lesion. The small lesion was situated over the left scapula; the large lesion was on the chest. The latter spot presented a hyperæmic border.

The changes in the small lesion were observed in the central third of the section, and were situated chiefly in the corium. The collagen was hypertrophied, appeared somewhat homogeneous, and there was little interlacing of the fibres. Elastin was absent or represented by small bits here and there. There was a cellular infiltration of varying intensity which was most marked around the vessels, glands and follicles. The infiltration consisted of connective-tissue cells, lymphocytes, or small plasma cells, and an occasional mast cell. Connective-tissue nuclei were abundant over the entire area. In a few places, where the cellular infiltration was most marked, collagen was absent. There were only a few vessels. The appendages were unaltered. The changes in the epidermis were slight. There was some hyperkeratosis.

In the large lesion the changes were also limited mostly to the corium. The outer portion (hyperæmic zone) was occupied by a perivascular cellular infiltration consisting of lymphocytes, connective-tissue cells, and a few plasma cells. Over the greater part of the rest of the affected area, and occupying the

papillary and most of the reticular layer, there was hypertrophy of collagen. The bundles and fibrils ran horizontally across the field. They were practically straight, showed no interlacing, and had very few nuclei. Elastin was almost entirely absent, and no blood vessels, glands or collections of cells were present. The papillæ were obliterated. In the lower part of the reticular layer there was a small amount of hypertrophic collagen, in the bundles of which were large numbers of connective-tissue nuclei. Beyond some hyperkeratosis and an obliteration of the rete pegs, there were no significant changes in the epidermis.

The second case was a woman of 49. The eruption had been present for six years. In the corium the collagenous bundles were comparatively thick and hypertrophic; they were straighter than normal and depicted but little interlacing. They traversed the field horizontally, and they contained comparatively few connective-tissue nuclei. There were numerous dilated lymph spaces, many of which contained small round and connective-tissue cells. Only an occasional mast cell was noted. Pigment cells were present throughout the corium and extended fairly deep into the reticular layer. Pigment granules were noted apart from the cells. Elastin was normal, but its arrangement was disturbed. The wavy line between the epidermis and derma was poorly defined, but not entirely obliterated. The papillary layer, too, was poorly defined, as large bundles of collagen extended into it. Vessels were sparsely distributed and were represented by narrow, longitudinal bands of cells. There were a few deeply seated, apparently normal coil glands, and one normal hair follicle at the edge of the lesion. All of these structures, including the vessels, were surrounded by a small round cell infiltration.

In the epidermis there was marked hyperpigmentation, but nothing else of importance.

HAZEN reports a case occurring in a woman of 32. The eruption had been present for about one year. A lesion on the flank was excised for histological study. The most striking feature was the almost complete absence of collagen and elastin in a circumscribed area in the subpapillary portion of the corium. Here there was a circumscribed area corresponding in size to the macule, and extending about half the depth of the corium, in which collagen and elastin had undergone marked rarefaction and degeneration. There was marked intra-cellular œdema. There was a total absence of connective-tissue nuclei. Within the degenerated area there was no cellular infiltration. No glandular elements were found. Only one or two blood vessels were present; in them the walls were lax and shapeless, and only the endothelial elements remained. The entire lesion was walled in by a moderately thick infiltrate consisting of small round cells and fixed tissue cells. This was especially marked around the vessels. The epidermis showed a slight thickening of the horny layer. In the centre of the lesion there was a gaping follicle almost completely filled with keratin. The granular layer was normal, but the prickle cells had almost entirely disappeared. The basal cells showed a marked hydropic degeneration, nearly every one containing one or two vacuoles. Pigment was entirely absent. The wavy line between the epidermis and derma was almost entirely obliterated.

WARDE studied and reported the case presented by Abrahams before the Dermatological Society of Great Britain and Ireland in April, 1902. The patient was a woman of 31. The eruption had been present for one year. Two lesions were excised, representing an early and an intermediate stage of evolution.

In the early lesion there was a thickened horny layer. The epidermis was irregular in thickness. There was a marked flattening of the interpapillary prolongations. There was some proliferation of the basal cells.

Corium. The chief changes affect the papillary layer and the upper portion of the reticular layer. There is a frank increase in the spindle-shaped connective-tissue cells. There seems to be a new formation of young connective tissue filling up the lymph spaces. Elastin is well preserved and quite profuse. The super-

facial blood vessels appear stretched and narrowed; some seem like fine threads. Endothelium is increased. Lower down the calibre of the vessels is larger, and they are surrounded by a scattered cell infiltration. The infiltrate consists of small round cells and a few plasma cells. An occasional mast cell may be seen. The coil glands and follicles are also surrounded by a moderate infiltration.

In the older lesion there is a flat area which includes the papillary layer and the upper part of the *pars reticularis*, which is sharply limited and appears as though inserted directly into the tissue. In the centre of the lesion is a zone of hypertrophic collagen with the bundles horizontally placed. The cellular infiltrate has disappeared from the body of the lesion, as also have most of the vessels. The elastin is still present, although atrophied. At the margin of the lesion there are scattered areas of cellular infiltration.

In the centre of the lesion the prickle-cell layer consists of a few flat cells, the greater portion having become keratinized with the resulting formation of a thick, horny plate. Exactly in the centre the horny layer is very thin, but elsewhere it is three to four layers in thickness. (This probably accounts for the clinical dell formation, or annular appearance.) Immediately beneath the epidermis are degenerated cell masses with irregular lymph spaces. The interpapillary prolongations are completely obliterated. At the periphery of the lesion the epidermis is thickened, the papillæ are preserved, and the basal cells, which are totally absent in the centre of the lesion, are here proliferated as in the earlier lesion.

HOFFMANN and JULIUSBERG report the histological examination in the case of a man of 33, who had had the eruption for four years. The lesions were on the chest and back.

In the centre of the lesion, and corresponding to the clinical picture, is a deep, wide follicle. Beneath this is a large coil gland, which is surrounded by a dense cellular infiltrate. There is a marked and widespread cellular infiltration in the corium. This involves the papillary and reticular layers at the periphery of the lesion, but only the *pars reticularis* is involved to any great extent in the centre of the lesion. Thus is formed a curved zone of infiltration with its concavity above. The cells are mostly lymphocytes and fibroblasts, with a few mast cells and an occasional poorly developed giant cell. The infiltrate is mostly perivascular, but also involves the coil glands. The blood vessels in the infiltrate are dilated, but their walls are unchanged. There is no alteration in the coil glands. In the centre of the lesion, above the infiltrate, the connective tissue shows a uniform structure. There are elongated cells which lie partly horizontally, while others form a network. There are no thick bundles, as found in normal connective tissue. The nuclei are irregularly disposed. Some areas present a normal number of nuclei, while in other locations the nuclei are deficient numerically. In the upper part of this zone blood vessels are absent, but lower down there are widely dilated vessels. The subepithelial elastic tissue is absent. A little lower down elastin increases. Lower still, at the upper margin of the infiltrate, the elastic tissue is again greatly diminished, even absent in spots. In the zone of infiltration elastin is fairly well preserved.

The interpapillary prolongations are practically absent, and the straight line between epidermis and derma is accentuated by numerous spaces which are probably dilated lymph vessels. The basal layer is not well differentiated. The granular layer is thinned. The horny layer becomes progressively thickened as the centre of the lesion is reached. It nearly fills the dilated follicle.

RUECKE reports a case which clinically resembled, to a certain extent, both *morphea guttata* and *lichen planus sclerosus* of Hallopeau, with a decided leaning toward the former disease. The patient was a woman of 50, who had had the eruption for ten years. The lesions were on the abdomen and thighs. A recent and an old lesion were studied histologically. There was thickening of the horny layer, attenuation of the rete, irregularity of the basal layer, vacu-

olization between epidermis and derma. The interpapillary prolongations were obliterated. There was increased density of both the papillary and reticular layers, with the bundles of collagen placed horizontally. There was a dilatation of the blood and lymph spaces in this area. The elastica was intact. There was a peripheral round-cell infiltration.

PETES, working in Dubreuilh's clinic, observed a case of white spot disease in a woman of 25. The eruption had been present for one and one-half years. A recent lesion situated between the shoulder-blades was ablated. Alterations are found in both the epidermis and derma, and the histological lesion, which is sharply defined, corresponds with the limitations of the clinical lesion.

The horny layer is markedly thickened. In the centre of the lesion there is a dilated follicle, filled with keratin and containing an atrophied hair. The granular layer is poorly differentiated. The mucous layer is vacuolated and reduced to a few rows of cells, which are closely packed; the prickles are hardly visible. The basal layer is irregular, in some places being composed of flat cells. The rete pegs are lost. The epidermis is markedly wavy or sinuous. The connective tissue is thick, dense and compressed, and somewhat homogeneous. The sudoriparous glands are atrophied. The sebaceous glands are normal, but surrounded by dense fibrous tissue. There are only a few blood vessels present, and these are compressed. The lymphatics are difficult to make out. There are a few isolated masses of cells, principally in the middle of the derma, and for the most part surround hair follicles and sebaceous glands. These masses are composed of lymphocytes, a few polynuclears, a few mast cells, and an occasional plasma cell.

In KRETZMER's two cases we find the following histological features: First case. The lesions were on the neck and were of one year's duration. The patient was 35 years of age. The horny layer is distinctly thickened. The rete is reduced to a few layers of cells. The basal layer is very irregular. The interpapillary pegs have disappeared. In the derma there is an area in which the connective tissue is poor in cells and the fibres are thin and stain very poorly with methylene-green tyronin. This area is walled in by an indistinct zone of infiltration composed of connective-tissue cells. These cells occur in groups around the blood vessels, in dense, confluent masses and diffusely throughout the zone.

The second case was remarkable on account of the clinical history of bullæ. The eruption had existed for twenty years in a man of 60. A lesion on the neck was excised. There is a thickening of the stratum corneum and stratum granulosum. The rete is thinned and the interpapillary prolongations have disappeared. The cutis shows a cell-free connective tissue in which the elastic tissue (which is very dense in the unaffected parts) is entirely absent. The diseased area extends deeply into the reticular layer. Around this connective tissue area, which is poor in cells and in which the elastic tissue is absent, there is a zone of infiltration consisting of large and small dense groups of cells. The cellular infiltrate consists mostly of lymphocytes, among which is a moderate number of plasma cells and numerous mast cells. In some places young connective-tissue cells are noted.

DREUW found, in his case of white spot disease, changes in the derma which corresponded exactly to the histology of Hoffmann and Juliusberg's and Riecke's cases. In fact, the histology of Dreuw's and Hoffmann and Juliusberg's cases were so similar that Dreuw did not take the trouble to carefully describe the alterations that he found in the derma. He considers that the changes in the epidermis are of great importance, and believes that more attention should be given to these details. For this reason the description of the histopathology of Dreuw's case deals mainly with the epidermis.

Under low power the epidermis is seen to be very sinuous with dell formations which are partly filled with keratin. As a whole, the epidermis is thinned, although in places it is fairly thick.

The stratum corneum is distinctly thickened and consists of thickened lamellæ which becomes net-like in the depressions.

The stratum granulosum is still preserved, but it is indistinct. The nuclei are poorly defined and the cells are vacuolated. At times this stratum is represented by only one layer of cells—in places, however, there are two or three layers of cells.

The chief changes in the rete take place in the basal layer. Here the cells are irregular, vacuolated and crenated.

The author avers that the early changes in the disease consists of a loosening of the basal cells, in a disintegration of their nuclei, and in the connective tissue changes that have been described by Hoffmann and Juliusberg.

This concludes the histological résumé of the cases of white spot disease that have been separated from any form of lichen planus, and which have either been designated a modified form of scleroderma or held as a distinct entity. Before entering into a discussion of these reports, we desire to give very briefly a synopsis of the histology of three cases which represent a modified or special form of lichen planus. They are cases that we have had an opportunity of personally studying.

Fordyce reported a case which resembled white spot disease clinically in *THE JOURNAL* for February, 1910. Histologically, the disease resembled Hallopeau's lichen planus sclerosus or atrophicus and von Zumbusch's lichen albus, Pawlow's lichen planus keloidiformis, Stöwer's lichen planus morphæicus, etc.

"The epidermis immediately over the lesion is depressed; the horny layer is hypertrophied; the granular layer has disappeared or left here and there only a trace, and the rete mucosum is reduced to from two to four layers of atrophied and flattened cells. The basal layer has lost its regularity, and here and there the degenerated cells have severed their connection with one another. The papillæ are obliterated, and this layer, with the upper reticular layer, is replaced by a dense tissue taking the acid stains with avidity, and having the homogeneous appearance of hyaline degeneration. No elastic fibres are demonstrable in this region. Practically all the blood vessels have disappeared and the few remaining ones in the lower portion of the lesion show a hyaline degeneration of their walls. At the lower margin of the lesion is a sharply defined infiltration of lymphocytes and some plasma cells. None of the appendages of the skin are present in these sections."

We herewith append a microphotograph (Fig. 5) of this case, which is a duplicate of Plate X, published in *THE JOURNAL* for February, 1910. It should be stated here that no clinical evidence of lichen planus was present, nor was there any evidence of infiltration nor any history of a preceding infiltration or papular for-

mation. Apparently the lesions developed as atrophic white spots and remained as such. It is possible, of course, that the patient overlooked a preceding papular stage. However, there was absolutely no clinical sign of lichen planus, nor were there any subjective symptoms. The lesions were atrophic, wrinkled, sharply margined white macules, scattered over the chest, back and legs. The history led Dr. Fordyce to conclude the histological description by saying that "histologically the condition might be looked upon as a sclerosis, but in connection with the clinical manifestations it is more rational to consider it an atrophy." Relative to the early atrophy, the author quotes Hallopeau to the effect that there is a primary and secondary atrophy, the former beginning as non-pigmented and sclerous lesions, the latter being consecutive to the regressive transformation of typical lichen planus. It might be stated, however, that all dermatologists are not in accord with this theory.

Quite recently Dr. Fordyce observed a woman of middle age who had white papules and macules on the abdomen, chest and thighs. This was a clean-cut case of lichen planus in which there were numerous white lesions. Briefly, the epidermis was very much thinned. The horny layer was somewhat thickened. The interpapillary prolongations were much diminished both in length and breadth. The entire papillary layer was sclerotic. The collagenous tissue of the reticular layer was hypertrophied. The blood vessels were almost entirely absent from the deeper layers of the derma, while in the papillary layer there were only a few vessels, and these, for the most part, presented occluded lumina. There were very few infiltrating cells, and these were around the capillaries. There were fewer connective tissue cells than normal. There were numerous chromatophores scattered throughout the derma. The elastic tissue was diminished. Fig. 6 is a microphotograph of this case.

Some eight or ten years ago Dr. Fordyce had a young boy under observation, who had lesions which corresponded clinically to white spot disease. They consisted of white macules with papular formation in the centre. There was no clinical evidence, nor was there any history of lichen planus. The pathological specimen which Dr. Fordyce was kind enough to permit us to study shows a sufficiently typical picture of lichen planus to answer all diagnostic requirements. We will not describe the histopathology, as the microphotograph (Fig. 7) will suffice to show the alterations in the tissue. We desire, however, to call attention to the marked subepidermic vacuolization which seems to be a feature in cases of white spot

disease. Unna, in describing his card-like scleroderma, calls attention to this vacuolization, and thinks it, by causing refraction, may be an element in the production of the characteristic white color of the affection.

It will be seen that these three cases of lichen planus sclerosus depict, apparently, three stages of the disease, in each of which the microscopical picture is quite different. It will be obvious, too, that in one stage the histological findings are not unlike scleroderma.

COMMENTS ON THE HISTOLOGICAL FINDINGS.

It will be noticed that the above résumé includes only the cases that have been separated definitely from the lichen planus group, with the exception of Fordyce's three cases of lichen planus sclerosus. We add these cases simply for the purpose of comparison. It is obvious that the histological picture in a case of lichen planus sclerosus at certain stages of evolution may markedly simulate special forms of scleroderma. In spite of Petges' very excellent histological differentiation, we still believe it is impossible to identify every case of white spot disease by the microscope alone. The entire pathological picture, together with the clinical findings, must be considered in order to arrive at a diagnosis. It is in this manner that the recorded cases of white spot disease have been divided into three groups, namely, those belonging to the lichen planus family and those which are either related more or less closely to scleroderma, or which, up to the present time, have remained entirely unidentified and hence unclassified. It is the last group that presents the greatest interest.

If every histological detail in the various cases is critically analyzed, much apparent confusion results. For instance, elastic tissue was reduced in the cases reported by Hoffmann and Juliusberg, Montgomery and Ormsby (Case 1), Unna, Johnston and Sherwell, Hazen and others, including our own case. On the other hand, Westberg, Warde, Montgomery and Ormsby (Case 2), Riecke and others noted that the elastic tissue was fairly well if not entirely preserved. The lymph spaces, especially just under the epidermis, were dilated in our case (especially in the early lesion), and in the cases of Hoffmann and Juliusberg, Riecke, Montgomery and Ormsby, Unna (early lesion), Warde, Johnston and Sherwell, and others. To the contrary, Westberg and Unna and ourselves, in the older lesions, found narrowed lymph spaces. In some cases there was dilatation of the blood vessels, while in other cases they were contracted or absent. The connective tissue was hypertrophied in our older lesion.

The same condition was noted in Unna's older lesion, and in the cases of Montgomery and Ormsby, Westberg, Warde and others. On the other hand, there was degeneration or reduction of collagen in our early lesion, in Unna's early lesion, and in the cases of Hazen and Johnston and Sherwell. The same differences may be found in regard to the presence and exact location of the cellular infiltrate, the sharp limitation and depth of the process, the involvement of the appendages and other detailed findings in the corium.

The changes in the epidermis are rather more uniform in the various cases, but here, too, there are a few marked differences. In all cases there was a partial or complete obliteration of the rete pegs. There was usually an attenuation of the rete and thickening of the horny layer. In most instances there was a modification of the basal layer, œdema of the rete, an alteration of the granular layer, and in at least three cases, namely, those of Petges, Hazen, and Hoffmann and Juliusberg, there were widely dilated follicles filled with keratin. In several instances there was a dell formation, and the epidermis was markedly sinuous. The amount of pigment varies in different cases. This is true, also, in reference to pigment in the corium. In many of the cases no mention is made of pigment having been found in the derma, but in our case (old lesion), for instance, a few chromatophores were noted, and in Montgomery and Ormsby's second case considerable pigment was noted. The changes in the epidermis have been designated as secondary and unimportant by most authors, but Dreuw, who made an especial study of the epithelial layer of the skin in a case of white spot disease, believes that the modification of the epidermis is of the utmost importance as a means of identification and differentiation.

In all probability, many if not all of the histological discrepancies can be accounted for by the fact that the various sections were made from lesions in different stages of evolution. The age of the patient, the location, duration and rapidity of evolution of the lesion, together with its clinical type, and various other factors, may greatly modify the histological picture.

Under these conditions it is only natural to expect widely different histological findings, especially when it is conceded that scleroderma may vary considerably in its clinical manifestations.

It would seem sufficient, in our present conception of scleroderma, to say that the white lesions of lichen planus sclerosus have been definitely separated from scleroderma, and that the various observers of cases of white spot disease, cases which do not belong to the lichen planus family, have, by a study of the pathological

details as well as the pathological and clinical pictures as a whole, placed them under scleroderma, accepting Unna's card-like scleroderma as the type. The exceptions to this may be found in the cases reported by Westberg, Johnston and Sherwell, and Hazen.

Now comes the important question: on the strength of the general histological picture, can we combine in one group all the cases of white spot disease that have not been definitely associated with lichen planus? We will first answer this question in the affirmative and then proceed to explain why. In the first place we must consider the opinions of other authors. Riecke places Johnston and Sherwell's case and Westberg's case in classes by themselves. He places all other cases, including his own, under Unna's card-like scleroderma.

Hoffmann and Juliusberg arrive at about the same conclusions.

Montgomery and Ormsby are inclined to group all the cases under the heading of scleroderma. They point out that the histology of Johnston and Sherwell's case does not correspond with the accepted ideas of scleroderma on account of the granular degeneration in the corium and the degeneration of collagen. They then call attention to the fact that their first case demonstrated some destruction of collagen, as did also Unna's early lesion. These we believe to be important points.

Hazen, excluding the lichen planus sclerosus cases, finds two remaining groups, namely, the scleroderma cases and the unidentified cases of Johnston and Sherwell, and Riecke.

Petges places all cases of white spot disease in two groups, namely, lichen planus sclerosus and scleroderma.

In comparing their case with Westberg's, Johnston and Sherwell state "the clinical appearances . . . are plainly identical. The difference in histological findings is probably due to the fact that Westberg's case has lasted at most two years against thirteen in ours. It is a common thing for the first change in a fibrous tissue degeneration to be a swelling of the fibres, followed after a variable period by a breaking up. In the early stage, also, they have an increased affinity for acid dyes. . . ."

It will be seen by this résumé of opinions that the consensus seems to be that clinical cases of white spot disease can be separated into lichen planus sclerosus and scleroderma, the only marked difference of opinion being in regard to the cases reported by Westberg, and Johnston and Sherwell, and these cases, Petges, and Montgomery and Ormsby think should be included under the general heading of scleroderma.

With this last opinion we are in accord, and it would seem that our case should help to bind the group. In our first specimen, which resembles, to a certain extent, that of Johnston and Sherwell, there was very little to indicate a sclerodermatous process. The essential changes were a dense and fairly deep cellular infiltrate in the centre of the lesion, at the upper part of which was a fairly large area of degeneration. There was loss of collagen in the centre of the lesion, while at the periphery collagen showed a tendency to increase. The blood vessels were increased in number, but were occluded by compression and by endothelial proliferation. The alterations in the epidermis were of a secondary nature.

The second specimen showed a distinct hypertrophy and hyperplasia of collagen with reduction in the number of blood vessels and a disappearance of the cellular infiltrate, some loss of elastic tissue, and an obliteration of the interpapillary pegs. While the first specimen failed to suggest a sclerodermatous process when taken by itself, it, together with the second specimen, conforms sufficiently well with Unna's card-like scleroderma to be placed in the same category.

If we had been compelled to depend upon the first specimen of tissue alone, we would have arrived, naturally, at a different conclusion than if we had only the second specimen to study. We are led to wonder, therefore, if Johnston and Sherwell, and Westberg would not have found an entirely different histological picture, and would not have arrived at a different conclusion if they had obtained specimens at various times in the evolution of the disease.

CONCLUSIONS.

We consider our case to belong to the scleroderma group.

We believe that all the recorded cases of white spot disease can be divided into two groups, namely, the lichen planus group and the scleroderma group.

Therefore, there is no entity that can be called white spot disease.

On the other hand, we believe that the name white spot disease should be retained, but with the understanding that it should signify a special form of scleroderma occurring clinically as white spots.

We desire to express our gratitude to Dr. John A. Fordyce for his kindness in allowing us to use the material which forms the basis of this communication. We also acknowledge our indebtedness to the staff of the Dermatological Laboratory of Columbia University for the technical work. We especially wish to thank Dr. Elizabeth C. Jagle for invaluable help in the study and interpretation of difficult histological material.

NOTE.—After this article was read before the American Medical Association, and the manuscript was in the hands of the printers, we noticed, in the *Ikono-graphia Dermatologica*, 1911, Fasc. vii, lix, an article on white spot disease by MENOWSKY, which we herewith append.

HISTORY. Patient is a woman of 28, of a neurotic temperament. Her trouble began at the age of 26, with sensations of cold and anæsthesia of the hands and feet. Gradually the skin became so tense as to interfere with the motion of the fingers. Since one year, numerous white, raised spots appeared on the breast and legs and trunk, with pruritus. At the same time, round, itchy lesions appeared, leaving scars.

STATUS. General health good. No adenitis or œdema. Pupils normal. Exaggerated knee jerks. Exaggerated mucous membrane reflexes. All the fingers are covered by a stiff, tense, hard skin, interfering with motion. Fingers sometimes cyanotic, at other times snow-white. Same condition on forearms, forehead and face.

On the breast, trunk and both legs are a large number of lentil to penny-sized, keloid-like, somewhat elevated, white, glistening spots. The skin over them is thin. Some show fine capillaries. Some have lilac rings, especially after the skin is rubbed. Other spots lie more in the niveau of the skin, are yellowish and distinctly atrophic. There are also brown pigmented spots, some of which are infiltrated. There are also transitional spots. Some of these on the legs show a white centre and a pigmented areola. Over the clavicles, the skin is wrinkled. Here there are numerous raised white spots, with normal skin between. Some of the lesions in this region have coalesced. There are also a few lentil-sized lesions of totally different character, showing central necrosis and later forming a depressed scar.

These lesions disappeared after six months under massage treatments. Some spots still showed infiltrations and pigmentations, others healed without leaving a trace. The scleroderma-like lesions on the arms and face were much improved.

Two pieces were excised. One showed the process at its most active stage and consisted of a raised white glistening lesion. The second piece showed involution—pigmentation.

EPIDERMIS. Reduced, here and there, to 3 layers. The cells of the papillary layer are irregular in arrangement and shape. Horny layer widened and disposed in single lamellæ. Papillæ irregular in size and shape. Epidermis is separated from cutis by irregular hollow spaces. In the upper cutis there is an area appearing imbedded like a flat plaque. This contains an infiltrate of a few mast cells, pigment and plasma cells. Some of these are at the edges of the plaque also. Lymph spaces widened. The plaque shows collagenous tissue and elastica, stained with neutral and acid orcein. Within this territory, the orcein red color of the tissue is brighter. In place of the coarse collagen bundles, there is a fine, delicate, light blue, homogeneous network, gradually merging with the deeper and denser collagenous tissue of the cutis, showing large hollow spaces.

Reduction of elastic tissue in entire cutis. Where elastica is still present, it is clumped. The changes in the collagen similarly affect the appendages—hair, sebaceous and sweat glands. As in the epidermis, they are surrounded by a homogeneous, collagenous tissue, containing infiltrates of mast cells, spindle-cells and a few plasma cells.

Specimen from abdomen shows involution of the lesion. The plaque of collagenous tissue is markedly narrowed, elastic tissue shows actively new formation.

We have, therefore, widening of horny layer, narrowing of epidermis, collagenous plaque showing homogeneous, bright-colored and thinned network. Infiltrate in and around the plaque; reduction of deeper, and almost total absence of subepithelial network. In the regenerative stage: narrowing of the plaque and actively new-forming elastic fibres.

This is a case of circumscribed scleroderma like Unna's kartenblattähnliche

Sklerodermie. The reason for different histological reports is due to the examination of sections in different stages of the disease. The case is considered the same as white spot disease.

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REVIEW

OF

DERMATOLOGY AND SYPHILIS.

Under the direction of

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ARCHIV FÜR DERMATOLOGIE UND SYPHILIS.

(September, 1913, cxviii, No. 1.)

Abstracted by JOHN H. STOKES, M.D.

EXPERIMENTAL CONTRIBUTIONS ON THE CHEMOTHERAPEUTIC ACTION OF ORGANIC PREPARATIONS OF ANTIMONY IN SPIRILLOSES AND TRYPANOSOMIASSES. G. HÜGEL, p. 1.

The writer presents the results obtained by the use of antimony in various combinations with the amino- and acetyl-derivatives of the benzol ring, in the treatment of one of the spirilloses of fowls, dourine and other trypanosomiasis in experimental animals, experimental syphilis in rabbits, and syphilis in man. The antimony content of the various preparations varied from about twenty to fifty per cent. The therapeutic efficiency and toxicity of the various preparations varied greatly with the position of the antimony-containing radical in the molecule, several of the meta-position compounds proving worthless and highly toxic while the corresponding para-positions were very efficient. Hügel also noted a marked difference between different preparations of the same drug, and ascribes this lack of uniformity

PLATE XXXV.—To Illustrate Article on White Spot Disease,
by GEORGE M. MacKEE, M.D., and FRED WISE, M.D.

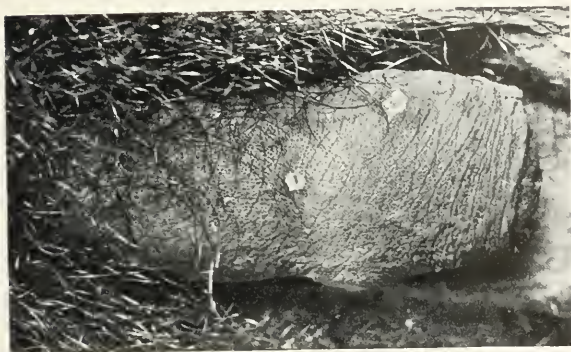


Fig. 2.
White Spot Disease,
Lesions on penis (see page 634).



Fig. 1.
White spots occurring in a case of dermatitis herpetiformis. Such lesions are encountered in pediculosis corporis, acne, prurigo and various other dermatoses. They have nothing in common with white spot disease (see page 631).



Fig. 3.

White Spot Disease (early lesion).

Low power. Showing triangular-shaped area of infiltration, with area of degeneration at base of triangle (see page 643).

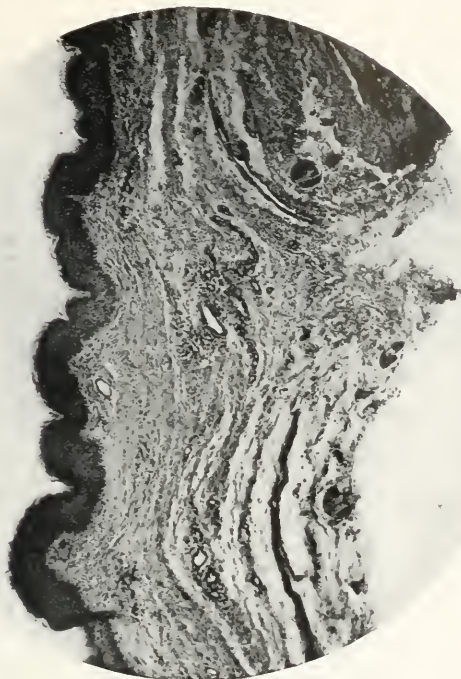


Fig. 4.

White Spot Disease (late lesion).

Low power. Showing absence of infiltration, loss of interpapillary pegs and hypertrophy of collagen (see page 646).

PLATE XXXVII.—To Illustrate Article on White Spot Disease,
by GEORGE M. MACKEE, M.D., and FRED WISE, M.D.

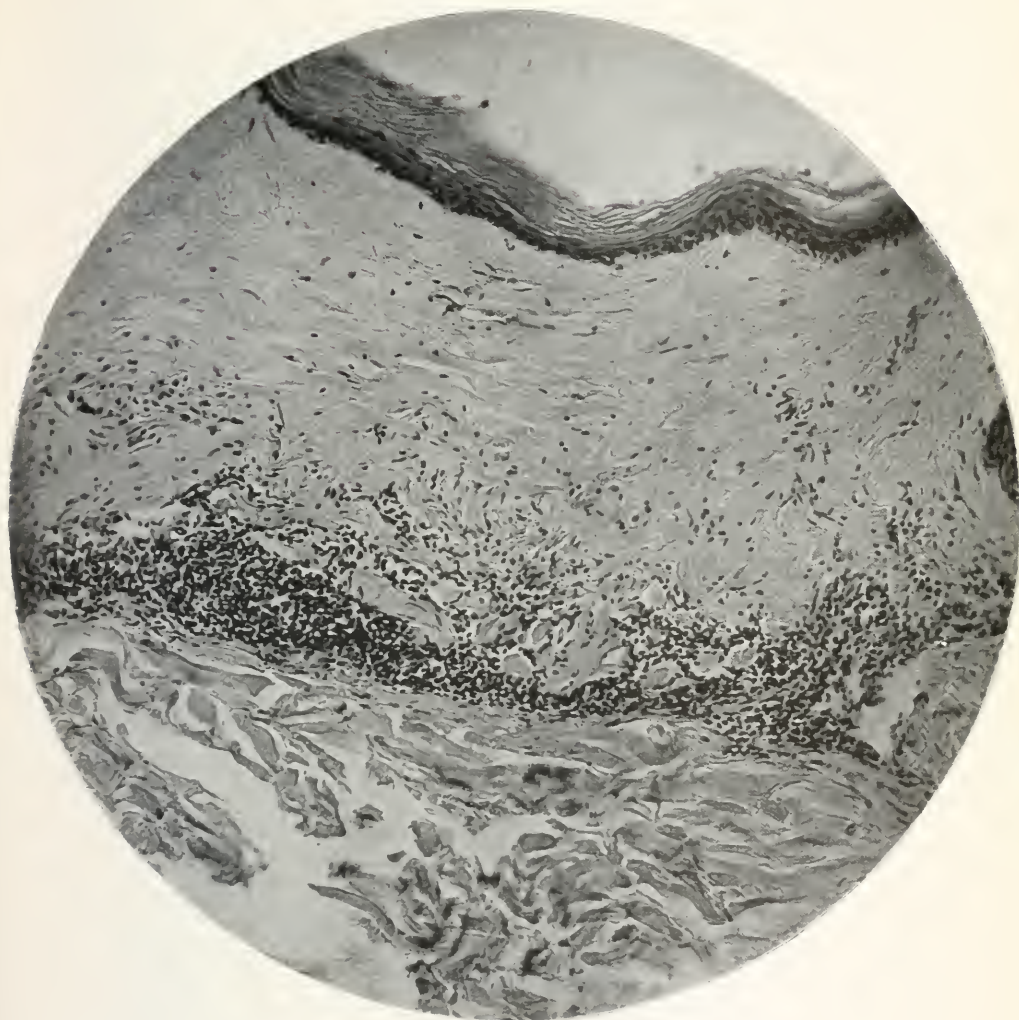


Fig. 5.

Lichen Planus Atrophicus.

Showing slightly depressed and sinuous epidermis. Horny layer increased. Epidermis thinned. Rete consists of from 2 to 4 layers of atrophied and flattened cells. Basal layer degenerated. Papillary layer has disappeared. It, with subjacent reticular layer, is replaced by dense tissue, showing hyaline changes. Vessels are obliterated. Few patulous vessels in lower part show hyaline degeneration of the walls. Inferior boundary of lesion bounded by infiltration of lymphocytes with a few plasma cells (see page 652).

PLATE XXXVIII.—To Illustrate Article on White Spot Disease,
by GEORGE M. MACKEE, M.D., and FRED WISE, M.D.



Fig. 6.

Lichen Planus Atrophicus.

Showing atrophy of epidermis, thickening of horny layer, shortening of interpapillary prolongations and sclerosis of papillary layer (see page 653).



Fig. 7.

Lichen Planus Atrophicus.

Showing the typical cellular infiltration of lichen planus, Note the subepidermic vacuolization (see page 653).

to technical difficulties in preparations which are not yet understood. Several combinations of arsenic and antimony and of antimony and mercury in the same compound were disappointing. The results with chicken spirilloes narrowed the choice of efficient drugs to three, namely the sodium salts of acetyl-p-aminophenylstibic acid (Sb 38.5%), benzolsulphon-p-aminophenylstibic acid (Sb 26%) and p-urethanophenylstibic acid (Sb 32%). They were found to have decided protective as well as curative properties. On rabbit syphilis spirochætæ could not be demonstrated in the testicular chancre after forty-eight hours, and the lesions underwent rapid involution with the second intravenous injection disappearing within a week. The first-mentioned preparation was apparently the most efficient, the dose used being two decigrams in two cubic centimetres of distilled water. The results on trypanosome infections were also encouraging, especially in the case of *Tr. brucei*. Encouraged by the results on rabbits the writer then treated three patients presenting secondary efflorescences with small doses (one decigram) of the acetyl derivative injected subcutaneously, once daily. The results were positive, but the effect was rated as rather less than that of daily injections of succinimide of mercury covering the same period of time. The injections were rather painful, but there was apparently no local reaction and good absorption. Spirochætæ were still demonstrable in lesions after the fifth injection. The other two preparations were decidedly less efficient. The dosage used on the patients was apparently rather small. The writer feels that there is abundant justification for further experimental study of the possibilities of antimony therapy as thus outlined.

ON ACUTE POLYARTHRITIS IN SECONDARY SYPHILIS. J. RUBIN, p. 61.

The author discusses *in extenso* a case presenting multiple arthritic involvement with rather anomalous cutaneous and systemic manifestations, a repeatedly positive complement-fixation test and a rapid and surprising progress toward recovery, as a result of a single injection of salvarsan and appropriate mercurialization. Violent headache, with nocturnal exacerbations, a high temperature and an atypical polyarthritis were combined with an eruption diagnosed by a dermatological consultant as a generalized impetigo, although the description of the lesion might suggest a bullous erythema of the iris type. The arthritis responded to salicylates and the eruption disappeared, but with recurrences. An early splenic enlargement subsided. Neuritic pains of great intensity and variability formed a prominent part of the later picture and new cutaneous manifestations were noted, diagnosed by a consultant as papular eczema on a seborrhœic base, and consisting of large plaques and annular lesions on the forehead, face, scalp and back. Mucous membrane lesions of an extensive and severe type made their appearance. The further progress of this interesting clinical panorama was abruptly terminated by four decigrams of salvarsan given intravenously. The writer leaves the question as to whether the picture is to be explained as a rheumatic polyarthritis plus syphilis or as syphilis alone, undecided. He merely calls attention, on the one hand, to the possible association of skin manifestations with non-luetic arthritides, apropos the prompt response of this case to salicylates, and to the known association of joint manifestations and profound systemic disturbances with the generalization of the infection in the secondary stage of syphilis, on the other hand.

THE VALUE OF THE LUETIC INDEX IN LUES AND PARALUES. B. P. SORMANI, p. 77.

In this communication Sormani discusses the application of his "luetic index" as described in previous articles (*Arch. f. Dermat. und Syph.*, 1909, xcviii, No. 1,

and *Zeitschr. f. Immunitätsforschung u. exper. Therapie*, 1911, ii, No. 2) to the serological study of early and late syphilis. The method is essentially a refinement of the original Wassermann technique, employing smaller amounts of complement, and intended to make possible an accurate quantitative estimate of the reaction. It is fully described. From comparative study of sera and spinal fluids in late central nervous system syphilis, Sormani undertakes to distinguish a vascular central nervous syphilis with a "luetie index of 0 and negative Nonne Phase I and cell count," from parenchymatous central nervous system syphilis, or "paralues." Under this designation he places tabes dorsalis and general paresis as in the old terminology. It should be recalled that Sormani's work was done prior to Noguchi's demonstration of the *Spirochaeta pallida* in the tissues of the brain and cord in tabes and paresis, and he himself calls attention to this fact in a note on the rather archaic "paralues." The work is an interesting confirmation from the serological standpoint of the demonstrably syphilitic nature of general paresis and tabes dorsalis, and it is largely as such that it is presented. In addition, the writer feels that his method is of value as a quantitative measure of the improvement of Wassermann-positive syphilis under treatment, in which conclusion he is supported by the clinical experience of Verhagen. Sormani furthermore feels the Nonne serum globulin and albumin test and the cell count on the spinal fluid to be so far from specific that he prefers his luetic index method to the conventional ones above, for the diagnosis of late central nervous system involvement. Wassermann, to whom Sormani submitted his methods and results, felt the method to be too elaborate for general adoption.

DERMATITIS ATROPHICANS RETICULARIS (POIKILODERMIA
ATROPHICANS VASCULARIS JACOBI) WITH MUCOID DE-
GENERATION OF THE COLLAGENOUS FIBRES. ALEX. GLÜCK,
p. 113.

The case described was one of dermatitis with atrophy occurring in a young man suffering from a muscular dystrophy. The essential features of the clinical picture consisted of diffuse and circumscribed atrophy of the skin with reticulated hyperpigmentation, oedematous swellings and patches of erythema due to superficial capillary dilatation. The process was especially striking upon the face, neck and forearms, but also present upon the back. The mucous membrane of the mouth presented a fine network of opalescent striae and a slight vascular dilatation. Vascular proliferation, round-cell infiltration, some destruction and fragmentation of elastic fibres, were among the commoner changes noted histologically. The feature of special interest was the demonstration of mucin in the areas of collagen degeneration in the upper layers of the cutis and occasionally in the deep as well. Glück comes to no definite ætiological conclusions, merely calling attention to the frequent association of atrophy of the skin with muscular dystrophies in the reported cases, and eliminating tuberculosis in his own patient from the list of possible factors.

ON THE THERAPEUTIC USE OF NORMAL SERUM IN PRURITIC
DERMATOSES. ERICH ULLMANN, p. 125.

The writer reviews the work of Freund, Weichardt and Mohr on the application of serum therapy to the toxæmias of pregnancy, and the favorable results reported by A. Meyer and by Mayer and Linser in the treatment of dermatoses in gravid women by injections of normal serum. Linser's further application of the method to the treatment of urticaria in the non-pregnant individual, and his reports of favorable results in the treatment of prurigo, strophulus, senile pruritus and pemphigus, together with Heuck's further confirmation of the very promising possibilities in the chronic itching dermatoses, led Ullmann to study the method

for himself. Heuck had noted its relative inefficacy in the vesicular dermatoses, and the entire lack of response on the part of psoriasis and the acute and chronic eczemas of adults.

Ullmann treated seven cases of dermatitis herpetiformis, two of generalized eczema in children, three of urticaria, four of pruritus of neurotic origin, one of prurigo and one of pemphigus, with normal human serum exclusively. The blood was obtained from healthy adults who presented no dermatological condition of any sort. The serum, obtained by defibrination and centrifugalization, was injected at once into the patient, occasionally intramuscularly but usually intravenously. No anaphylactic accidents, symptoms of intolerance, or signs of any local or general reaction of any description were noted. Eczema and dermatitis herpetiformis were absolutely uninfluenced by the treatment. The best results were obtained in the cases of pruritis of neurotic origin and are attributed by Ullmann to suggestion rather than serum. Pruritus was relieved in prurigo and urticaria but little other effect was noted. Ullmann opposes Linser's suggestion that a pathological deficiency of complement in the patient's serum accounts for the beneficial effect claimed by him from injections of normal serum. He also regards changes in the percentage of eosinophiles in the blood as of doubtful, if any, significance. He concedes that the method is at least harmless and worthy of a further trial. There is a brief note on Spiethoff's auto-hæmatotherapy, in which favorable results have been reported through the production of local reactions. (Spiethoff, *Münch. med. Wchnschr.*, 1913, No. 10.)

TWO CASES OF MULTIPLE SCLERODERMIA CIRCUMSCRIPTA (WHITE SPOT DISEASE?) E. KRETZMER, p. 148.

In the first of these cases the sclerodermatous areas appeared as whitish plaques on the neck; in the other the appearance of the plaques was preceded by the development of vesicles. The histological picture of the fully developed process was essentially the same in both cases, and consisted of epidermal atrophy, especially of the Malpighian layer, with disappearance of the papillæ, a marked connective tissue proliferation in the corium, with a loss of elastica and thinning of the collagenous bundles. There were numerous areas of perivascular round cell infiltration, with many plasma cells and moderate numbers of mast cells. Kretzmer proceeds to compare the clinical and pathological picture with "white spot disease" as discussed by Juliusberg and by Dreuw, and with Unna's "card-like sclerodermia." He feels that the term "white spot disease" as used in the literature does not represent a clinical or pathological entity, and regards the term as unfortunate, suggesting in its place the more definite coupling of "morphœa" or "sclerodermia" with descriptive adjectives such as "guttata," "maculosa" and the like, a designation more in harmony with the recognized features of the disease.

ON A PECULIAR DISTRIBUTION OF PIGMENT ALONG VOIGT'S LINES. (CONTRIBUTION TO THE STUDY OF VOIGT'S BOUNDARIES.) SH. MATSUMOTO, p. 157.

Matsumoto calls attention to special anomalies of pigmentation seen among the Japanese, in which there was a linear distribution of hyperpigmentation on the upper extremities, following approximately the Voigt lines of terminal nerve distribution in the skin. On the upper extremity a macular type of distribution was also noted. On the lower extremities the pigmentation was linear exclusively. The discussion deals with the bearing of these observations upon the relation of pigment to hair formation in the skin and upon the segmental embryology of the skin. An embryogenetic conception is offered as a more plausible basis for explanation of the phenomenon than the essentially theoretical nerve-distribution conceptions of Voigt and Bolk.

SYPHILIS IN THE GERMAN PROTECTORATES. GUSTAV HEIM, p. 165.

This is a detailed and very interesting report on syphilis in the native populations of Germany's insular and tropical possessions. The disease is apparently widely disseminated, and is seldom seen by the physician in practice, during either the primary or secondary stages. All the characteristic European manifestations have, however, been reported by observers, and there is no apparent reason for regarding the disease as any more or less severe, or more or less amenable to treatment than on the Continent. Many observers comment on the ease with which natives are salivated, in some cases even in spite of careful hygiene. Atoxyl administered intramuscularly in a limited number of cases is reported extremely effective in primary and tertiary syphilis, less so in the secondary manifestations. Tabes and general paresis are rare among the native populations considered, or at least are rarely seen by the physician.

ON THE GENERAL DERMATOLOGY OF ALI IBN AL-ABBAS (HALY ABBAS) OF THE TENTH CENTURY, A. D. PAUL RICHTER, p. 199.

This is a translation into German of certain chapters relating to dermatology from an Arabian system of medicine of the tenth century.

DERMATOLOGISCHE WOCHENSCHRIFT.

(Jan. 17, 1914, lviii, No. 3.)

Abstracted by CHAS. GOOSMANN, M.D.

THE ABDERHALDEN REACTION. A. BORNSTEIN, p. 73.

The Abderhalden reaction rests on the detection of specific ferments in the blood serum. In pregnancy, for instance, the blood serum contains a specific ferment against placental proteid. Bornstein has now found a ferment in certain cases of syphilitic serum, but this ferment will act on the proteid from many different organs. In early stages of syphilis, with a negative Wassermann reaction, the ferment is absent. In later stages, with positive Wassermann, the ferment is still absent. After energetic treatment, if the Wassermann remains positive, no ferment develops; but if the former becomes negative, then the ferment test becomes positive. This is the usual course, to which there are some exceptions. In studying unselected cases of syphilis the ferment reaction was positive in about 10%.

This reaction has some theoretic interest, because it shows the presence of abnormal constituents in blood serum even after the Wassermann test is negative. It is also important to rule out this reaction when using the Abderhalden test for other purposes. For instance, if a ferment is present that digests placental proteid, it should be checked with other organ extracts; the ferment found in syphilis will digest these also, and show its dissimilarity to the specific ferment of pregnancy.

The author's experiences with cancer are also given. He gets from 40 to 70 per cent. positive reactions in cancer, and concludes that a positive diagnosis is valuable, but a negative one is of little significance.

A summary of cases in which the Abderhalden reaction has been found useful includes dementia præcox, exophthalmic goitre, pancreas necrosis, and others.

(*Ibidem*, Jan. 24, 1914, lviii, No. 4.)

THE TREATMENT OF PURULENT BUBOES WITH TIEGEL'S "SPREIZ-FEDERN." JOHANNES HERMANS, p. 112.

Tiegel's "Spreizfeder" appears to be a spring-like arrangement to hold the lips of an incision apart. It is made by the firm of Emil Kraft, Dortmund. Hermans

reports 14 cases of purulent bubo treated by an incision of 2 to 3 cm. length, and then having one of the above named instruments inserted to keep the wound open. A single irrigation with weak antiseptic or normal salt solution is followed by a dry dressing. Packing the wound injures the cells, and it is the purpose of the instrument to supplant the packing. In 24 hours the instrument is removed, and pus formation usually ceases. Dry dressings are used, and in most cases complete healing had taken place in 10 to 12 days (if the bubo was ripe, so that a deep incision was not needed).

(*Ibidem*, Jan. 31, 1914, lviii, No. 5.)

COPPER SALTS IN THE TREATMENT OF ULCUS MOLLE. JOHAN ALMKVIST, p. 142.

Undoubtedly the quickest treatment of soft chancres is by Welanders' heat method. This is not suited, however, to ambulatory cases. It also requires curetting of the granulations, which is often very painful. Almkvist has found his copper treatment almost as rapidly acting as heat, without the objectionable features. He uses copper glycooll (amido-acetic acid-copper oxide), which does not precipitate the albumin and therefore is more penetrating than copper sulphate. Any of the following formulæ may be used: 1 or 2% aqueous solution of the copper compound 100.0, tragacanth 3.0, strong alcohol 5.0; or copper glycooll 1.0 or 2.0, distilled water 10.0, glycerin 40.0, kaolin 50.0; or copper glycooll 1.0 or 2.0, distilled water 10.0, glycerite of starch 90.0.

The sore is washed and the ointment thoroughly rubbed in, not overlooking the corners. A thick layer of ointment is then kept on with a bandage. Undermined skin is best removed, to permit direct application. Three or four applications a day are desirable unless the ointment is easily kept on the sore for a longer period. In phimosis cases the ointment is injected once a day to thoroughly fill the preputial sac. Fluctuating buboes are incised, irrigated and the cavity filled once a day.

Statistics of 65 cases are given, of which 6 had clean granulations after 2 days' treatment, 12 after 3 days, 22 after 4, 17 after 5, 4 after 6, 3 after 7 days, and 1 required 15 days.

(*Ibidem*, Feb. 7, 1914, lviii, No. 6.)

A CONTRIBUTION TO THE GOLD AND COPPER TREATMENT OF LUPUS VULGARIS. V. MENTBERGER, p. 169.

Many efforts have been made to find a substance with elective action on the tubercle bacillus. Merck's gold and potassium cyanate has been used intravenously in the treatment of lupus vulgaris. Lekutyl, a copper lecithin compound, has been recommended for both internal and local treatment. Mentberger reviews the literature and gives the results of his own experiences, from which he concludes that chemotherapeutic methods have not yet supplanted the older forms of treatment. His preference is for excision, and where that is impossible, curetting and thermo- or galvano- cauterization, followed by a 10 or 20% pyrogallol ointment. All cases receive tuberculin and often Roentgen exposures, giving an erythema dose with a soft tube. The Finsen light he has not used, but Kromayer's quartz lamp has been very useful, particularly in small and not badly ulcerated areas.

SOME REMARKS ON THE ARTICLE "THE TREATMENT OF PEMPHIGUS WITH INJECTIONS OF VESICLE CONTENTS," BY HOLOBUT AND LENARTOWICZ. FRIEDRICH LUTHELEN, p. 181.

Holobut and Lenartowicz, in their article on pemphigus (see *Jour. Cutan. Dis.*, June, 1914, xxxiii, No. 6, p. 475) considered the injection of vesicle contents as

a form of vaccine treatment. Luithlen believes their results might be due entirely to the serum injected, since it has been shown that injections of serum or other colloids favorably influence exudative lesions, by reducing vascular permeability.

(*Ibidem*, Feb. 14, 1914, lviii, No. 7.)

EUCERINUM (UNNA), FOR THE PREVENTION OF RECURRENCE
IN ECZEMA. M. BOCKHART, p. 193.

The horny layer of the skin cannot resist the penetration of bacteria unless sufficient fat is present to fill the intercellular spaces. The indirect cause of most recurrences, in eczema, is deficiency of fatty substances in the horny layer, due to the action of soap or other irritating chemicals, which may also lessen the cohesion of the epithelial cells. For prophylactic treatment Bockhart formerly advised alcohol as an antiseptic, followed by inunction with cold cream. Since using eucerin he finds the alcohol unnecessary. Eucerin has the distinction of being more readily taken up and retained by the epidermis than any other fat. Used in the form of eucerin-cold-cream, even occupation eczema of the hands is kept from relapses. One to three applications are made daily, always removing the surplus with a soft cloth.

Seborrhæic eczema is less resistant to treatment than the other forms because the skin is saturated with fat; and therefore in this form only alcohol is needed to prevent recurrence.

(*Ibidem*, Feb. 21, 1914, lviii, No. 8.)

PROTOZOAN OR MOLD-LIKE DEVELOPMENT OF SPIROCHÆTÆ?
E. MEIROWSKY, p. 225.

McDonagh believes the spirochætæ to be merely the male sexual form of his "Leucocytozoon syphilidis," which he classifies as a protozoan. Gross, on the other hand, declares: "The search for analogies between the spirochetes and protozoa must be given up. The finding of sexually differentiated forms or similar developmental cycles is no longer to be expected." And with this statement Meirowsky is in accord.

The author studied, among others, *B. tuberculosis*, *B. lepræ*, *Spirillum rubrum*, and several types of spirochætes, among them *Sp. pallida*. The bud-like bodies, as well as the occasional branching forms found in *B. tuberculosis* and *B. lepræ*, differentiate these organisms from the true bacteria, and show their relationship to the higher molds. Some of the *Spirochætæ pallidæ* also show bud-like bodies, single or multiple, and in the latter event they are attached to the spirochete body by a fine pedicle. Some of these bodies were also seen detached; these appeared capable of growing into a spirochæte. Branching forms were also seen, but Meirowsky was unable to see any evidence of a nucleus, blepharoplast, flagellum, or undulating membrane, and therefore concludes that the spirochætæ cannot be classified with the protozoa. The article is well illustrated.

THE APPLICATION OF OINTMENTS WITHOUT OINTMENT JAR,
BRUSH, OR SPATULA. DREUW, p. 233.

Dreuw describes a cylindrical ointment container, with a rubber bulb, pressure on which squeezes out the ointment. It is supposed to be better than a collapsible tube because the latter is unsightly when partly empty, and the inequalities of the tube surface collect dust. Dreuw's container can be refilled.

THE APPLICATION OF OINTMENTS WITHOUT A BANDAGE. DREUW, p. 238.

As ointments are disagreeable to the patient, Dreuw uses an adhesive substance made up of lanolin, zinc oxide, green soap and salicylic acid. By varying the proportions the consistence is changed, and three varieties are listed: *Adhæsolum molle*, *Adhæsolum* and *Adhæsolum durum*. Various drugs can be incorporated, and the preparation warmed and spread on the skin.

(*Ibidem*, Feb. 28, 1914, lviii, No. 9.)

LUPUS OF THE GLANS PENIS. ALFRED KRAUS. p. 249.

Kraus reports a case of non-ulcerated lupus, the diagnosis of which was confirmed by biopsy. The patient had had previous attacks of herpes progenitalis, and the author believes infection to have entered through such a lesion.

THE USE OF IODINE CONTAINING ANTISEPTICS IN ECZEMA OF CHILDREN. MICHAEL SZABO, p. 252.

Boric acid has a wide use in intertrigo and eczema of children, although eroform, dermatol, and noviform are more antiseptic and drying. The author obtains the best results with vioform, which contains 40% iodine. The iodine is liberated with great regularity, and there is no irritant or caustic action. In intertrigo vioform powder or a 5% ointment is used, while in eczema a 10% ointment is preferable.

(*Ibidem*, Mar. 7, 1914, lviii, No. 10.)

THE RESULTS OF INOCULATING RABBIT TESTES WITH THE BLOOD AND OTHER BODY FLUIDS OF SYPHILITICS. FR. GRAETZ, p. 282.

In a long article Graetz gives the results of his own, as well as Aumann's experiments, and discusses, among others, the valuable work of Uhlenhuth and Mulzer (abstracted in *Jour. Cutan. Dis.*, Feb. 1914, xxxii, No. 2, p. 162).

The author had only 2 positive results from 7 cases of syphilis, a much smaller proportion than Uhlenhuth and Mulzen, but he believes that rabbit inoculations will ultimately be of more general value in determining a cure. (*To be concluded.*)

(*Ibidem*, Mar. 14, 1914, lviii, No. 11.)

THE RESULTS OF INOCULATING RABBIT TESTES WITH THE BLOOD AND OTHER BODY FLUIDS OF SYPHILITICS. FR. GRAETZ, p. 305. (*Concluded.*)

The semen, particularly, should be studied by animal inoculations, as the many cases of latent syphilis which are still infectious, indicate the importance of the testicles as a habitat for spirochætæ. To determine fitness for marriage, such a test may be more important than the Wassermann. The blood and spinal fluid of six cases of progressive paralysis were also examined by rabbit inoculation, with negative results.

A CASE OF PRIMARY SYPHILIS ON THE AURICLE. ALVARO LAPA, p. 320.

In 1911 Krause collected 27 cases of this unusual localization. Lapa's case was in a sailor, and the Wassermann test was positive. The mode of infection could not be determined.

(*Ibidem*, Mar. 21, 1914, lviii, No. 12.)

GENERALIZED HUMAN INFECTION WITH MICROSPORON OF ANIMAL DERIVATION. G. NOBL, p. 337.

This is a detailed report, with illustrations, of a case of microsporon lanosum infection in a 15-year-old girl. The lesions were numerous on the face, and some were scattered on the arms, hands and thorax. The scalp was free. The honey-like crusts rested on a reddened, œdematous and elevated base, while miliary pustules surrounded the crusts. The wide distribution of crusted and acutely inflamed lesions suggested a pyogenic infection, but the similarity in size and sharply circumscribed nature of the oval or round efflorescences pointed to a mycotic origin. There was no history of a skin eruption in the family or playmates, and in answer to Nobl's question about household pets, the mother stated that they had a dog, for the past 3 weeks, but it was perfectly healthy. When the dog was brought to the clinic it showed a large number of bald spots. Cultures from the girl and the dog were identical.

Healing was rapid, and Nobl emphasizes again the principle that the severity of the reaction varies inversely as the number of the microbes. Jadassohn has applied this rule also to tuberculosis, syphilis and leprosy.

ON EMBARIN AND MERLUSAN. JULIUS FÜRTH, p. 343.

The salvarsan preparations cannot displace the centuries-old mercury treatment of syphilis. All remedies should be used, unless distinctly contraindicated. Embarin and merlusan are mercurials, of which the first is intended for intramuscular use, while the second is for oral administration.

Embarin was used in 26 cases. There was no pain from the injections, and the syphilitic symptoms were rapidly benefited. The positive Wassermann reaction was not changed, however, in a single case, and in 8 cases the medicine had to be discontinued on account of fever, severe headache and exhaustion. One case became delirious.

With merlusan, 5 weeks' treatment failed to influence the exanthem, but Fürth obtained good local results with a ½% solution on condylomata and chancres.

(*Ibidem*, Mar. 28, 1914, lviii, No. 13.)

CLINICAL OBSERVATIONS ON THE ACTION OF SALVARSAN AND SALVARSAN WITH MERCURY, ON THE FŒTUS. KARL HEDEN, p. 361.

Marcus has found 90.2% syphilitic offspring from untreated mothers, 82.3% when the mothers were treated, but not during gestation, and 45.6% when treated during gestation. The series included 127 cases.

Heden reports his results with salvarsan (or neosalvarsan) administered during gestation, and another group treated with salvarsan (or neosalvarsan) combined with mercury. Exact tables are given. Briefly: 14 mothers, untreated previous to the pregnancy, received salvarsan, but no mercury, during gestation. Seven children were serologically and clinically normal, 2 had a positive Wassermann, and 5 had clinical symptoms. Three mothers were treated before gestation. Of these 1 had no further treatment, and her child had reseola and osteochondritis. Another had one salvarsan treatment before and one during gestation. The child had coryza and strongly positive Wassermann. The third child had 15 hektin injections before, and 2 salvarsan treatments during gestation. The child was very small (2250.0 grms.), with a weakly positive Wassermann.

In contrast to the preceding, 10 mothers received combined salvarsan and mercury treatment during gestation. The salvarsan injections varied from 2 to 8.

and the injections of mercury from 4 to 10. The 10 children were all free from clinical and serological evidence of infection. Three, however, became positive in 5, 8, and 9 months respectively.

Heden admits that the number of cases is inadequate to draw positive conclusions, but they seem to indicate the value of the combined treatment.

A CASE OF CONGENITAL SYPHILIS TWENTY YEARS AFTER INFECTION OF THE MOTHER. HAROLD BOAS, p. 372.

In 1892 the woman became syphilitic. After inunction treatment she remained clinically well, and was married 2 years later. Her husband has never had any symptoms, and has a negative Wassermann. Twelve children were born (including 2 abortions and one premature still birth). The 2nd, 6th, 7th, and 10th child are well, with negative Wassermann. The 12th child, born in 1912, remained well until 1½ months old, then developed snuffles, showed a positive Wassermann, and died of pneumonia. Spirochætæ were found in the liver. The mother's blood gave a strongly positive reaction.

Boas agrees with Marcus that it is not so much the duration of infection, as the thoroughness of the treatment, that counts. Other cases of a similar nature are collected from the literature, including one reported by Marcus, of a woman with congenital syphilis, who had a syphilitic child at the age of 24; and another, by Boeck, transmitted 37 years after infection.

THREE CASES OF PSEUDO-PELADE (BROCQ) OF PROBABLY CONTAGIOUS ORIGIN. (ALOPECIA PARVIMACULATA, DREUW). MENAHEM HODARA, p. 375.

This disease (the pseudo-pelade type of folliculitis decalvans) is usually classed as a trophoneurosis. Dreuw, however, has seen an epidemic affecting 200 school children. The cases reported by Hodara occurred in a mother and two daughters, and showed typical smooth, bald patches with slight atrophy.

DEUTSCHE MEDIZINISCHE WOCHENSCHRIFT.

(Apr. 23, 1914, xl, No. 17.)

Abstracted by CLARENCE ALLEN BAER, M.D.

TREATMENT OF LUPUS WITH FRIEDMANN'S TUBERCULOSIS CURE. A. BRAUER, p. 838.

The author treated eleven cases of lupus following closely the directions as given by Friedmann. Intramuscular injections were given. Few complained of pain. The majority had subfebrile temperatures the first days, but one patient had chill and high fever on the first day. Headaches occurred, but by the fourth day all were apparently well. Only three cases showed a local reaction. Four times abscesses occurred at the point of injection. Improvement was seen in some cases for ten to fourteen days and no case showed improvement longer than three weeks. Six weeks after the injection no case showed so good a result as could have been obtained by local treatment for the same length of time.

CURE OF SYPHILIS BY COMBINED SALVARSAN-MERCURY TREATMENT. W. SCHOLTZ, p. 845.

The author gives results from his clinic and concludes that we must emphasize the benefits resulting from a combined salvarsan-mercury treatment and that

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there are no dangers for the patient if properly employed. He further states that no treatment can be outlined, but that every case must be handled on individual lines.

(*Ibidem*, April 30, 1914, xl, No. 18.)

THE PROBLEM OF THE GENESIS OF INTERSTITIAL KERATITIS. SCHIECK, p. 890.

The author advances the theory that parenchymatous keratitis rests on local anaphylactic processes that are produced by the action of syphilitic antibodies on a syphilitic antigen, lying dormant in the cornea.

LIGHT THERAPY IN LUPUS. JESIONEK, p. 895.

The therapeutic effect of Finsen light treatment of lupus rests on the inflammatory productive power of the light, particularly on the power of the serous fluids produced to penetrate the tissues. Such an actinic inflammation of lupus nodules can be obtained without the aid of the expensive Finsen apparatus. Complement is brought to the lupous tissue in the serum produced by the inflammation, and this complement combines with amboceptors that are present in the tuberculous nodules, and antibodies are thus formed.

TREATMENT OF SEVERE SYPHILITIC STRICTURES OF THE URETHRA. BERTHOLD GOLDBERG, p. 913.

The author maintains that patients with urethral strictures who have had syphilis should always receive energetic antisymphilitic treatment, followed later by mild mechanical dilatation. Urine should be passed naturally and not per catheter.

(*Ibidem*, May 7, 1914, xl, No. 19.)

THE RESISTANCE OF LOCAL SPIROCHÆTÆ AGAINST ABSOLUTE SALVARSAN TREATMENT. WILH. WECHSELMANN and GEORGE ARNHEIM, p. 943.

The authors conducted many human and animal experiments and conclude that by intensive salvarsan treatment a complete sterilization of a chancre is possible—more often obtainable than by mercury treatment alone. A negative Wassermann can be obtained when spirochætæ can still be demonstrated in tissues; therefore, the salvarsan treatment must be continued until the sclerosis is entirely gone and negative blood Wassermans are found by repeated tests. The main hope in syphilis therapy is the complete sterilization in the chancre stage.

DEATH RESULTING FROM ACUTE ARSENIC POISONING AFTER SALVARSAN INJECTION IN A NON-SYPHILITIC PATIENT. LUBE, p. 946.

ÆTIOLOGY OF PSORIASIS. JAERISCH, p. 962.

The author leans toward the theory that psoriasis is an expression of constitutional disease because of his splendid results in treating the disease by injections of vaccines (staphylococcus).

(*Ibidem*, May 14, 1914, xl, No. 20.)

SALVARSAN TREATMENT OF PROGRESSIVE PARALYSIS. RUNGE, p. 998.

Salvarsan therapy is indicated in early cases of paresis and in such cases in which the acute and severe symptoms occur not too long after the initial infection.

The treatment must be carried on at intervals, the total dosage depending on the condition and tolerance of the patient, but a total of 5 to 10 grams ought to be given. Remissions are less frequent in cases thus treated than with other anti-syphilitic therapy. Salvarsan treatment leads to a modification of the course of the paresis, often even increasing the patient's working powers. All cases do not show this great improvement—some cases are even entirely unaffected by the treatment. Whether or not a cure of paresis can be obtained by salvarsan is not yet certain.

MUENCHENER MEDIZINISCHE WOCHENSCHRIFT.

(July 15, 1913, ix, No. 28.)

Abstracted by ARTHUR WM. STILLIANS, M.D.

ON THE PHOTODYNAMIC ACTION OF THE CONSTITUENTS OF COAL TAR PITCH ON THE HUMAN SKIN. L. LEWIN, p. 1529.

The action in the light of certain fluorescent substances upon various animal cells has been proved, as has their lack of action in the dark. Fishes exposed to the action of eosin, acridin chloride, dichloranthrazendisulphonate or bengal rose and to daylight suffered, within a few hours, necrosis of the epithelial cells of their fins and died in a day and a half, while the controls, kept in the dark, lived many days. Mice and rabbits injected with eosin and exposed to light suffered necrosis of the ears and other parts not well protected by hair. Epileptics taking large doses of eosin had œdema and ulceration of the skin of the face and hands and loss of the finger nails, while the covered parts were unaffected.

The author reports a series of cases of dermatitis occurring in the workmen in a large electrical supplies factory, where coal-tar pitch is used for making insulation tubes. Soon after pitch from a new source began to be used, complaints of burning and itching of the skin became frequent, and the workmen were found to have a slight erythema, macular or diffuse, of the face, hands and forearms. In a few cases only was there a subsequent exfoliation. The itching and burning sensations were out of proportion to the faint eruption. Water irritated the dermatitis, but it yielded to a soothing ointment and washing with a very thin soap solution.

The author thinks that the eruption was due to the action of light after absorption of acridin through the skin or lungs. In 51 cases the face only was affected, in 13 more only the face and neck, and only in 12 cases were the hands and arms alone involved. Over 85% of all cases complained of itching, only when in the light.

THE INTRACUTANEOUS REACTION IN SYPHILIS AND FRAMBÆSIA.

G. BAERMANN and H. HEINEMANN, p. 1537.

This very interesting report from Sumatra on the luetin reaction gives substantially the same findings as reports from the temperate zone, except that nearly all primary cases of syphilis, after the fifteenth day, gave a positive reaction. The early secondary cases gave negative reactions just as others have found. The authors think that this difference may be due to the tendency of the Javanese, who make up the majority of their cases, to exhibit early in the course of syphilis, localized lesions. They found that late secondary cases, with slight lesions sharply localized, gave positive reactions, while more severe cases, even though localized, were negative. Tertiary cases, cerebro-spinal cases and well-treated latent

cases gave positives, while untreated latent cases were negative. Delayed reactions were very rare in their experience.

The hope that the luetin reaction would aid in differentiating frambæsia from syphilis was disappointed. The reactions in frambæsia were not different from those of syphilis; but the fact that a large percentage of cases with old frambæsia scars gave positive reactions to luetin, raises many questions which the authors hope to solve by further work.

The frequent repetition of the test on healthy persons gave consistently negative reactions. The authors suggest the importance of a standard of strength of luetin, so that the results under similar conditions may be fairly uniform.

(*Ibidem*, July 22, 1913, ix, No. 29.)

A SIMPLE METHOD OF DETERMINING THE PHAGOCYtic INDEX AND ITS CLINICAL VALUE. B. STUBER and F. RUETTEN, p. 1585.

The authors do not try to show the specific action of the phagocytes toward any particular organism, but their general efficiency. They use the spores of the thrush fungus as a test object, growing them on eosin-glycerin-agar to prevent the growth of mycelium. A suspension of these spores is mixed with the blood, incubated at 37° C. for 45 minutes, centrifuged, and smears made and stained. The opsonic index so determined is compared with the normal index, which in the experience of the authors varies from 0.8 to 1.2. This is markedly reduced by the ingestion of small amounts of alcohol or iodides, and during the first days of the menstrual period. With these exceptions in mind and a careful attention to the technique as given, the results are reliable.

The authors have used the method for over a year and find in all infections that a low index means a severe infection, a rising index the approach of convalescence. The phagocytic curve is always in advance of the temperature curve, so that changes in the course of the disease can be foretold. The index is wholly independent of leucocytosis or leucopenia. In cases of tuberculosis the index is variable, and some of the progressive cases have an astonishingly high index, designated by the authors as paradoxical.

DETECTION OF TUBERCULOSIS BY ANIMAL INOCULATION WITH THE HELP OF THE VON PIRQUET REACTION. ERICH CONRADI, p. 1592.

The cutaneous reaction to undiluted old tuberculin has given the author great satisfaction in determining the results of guinea-pig inoculation. In from 10 to 19 days after inoculation the test was positive in all animals that showed tuberculosis when posted. He believes that this method is a very valuable means of getting earlier information from animal inoculation than is otherwise possible.

A NEW PROCEDURE IN THE INTRAVENOUS INJECTION OF NEOSALVARSAN. C. ALEXANDRESCU-DERSCA, p. 1601.

Led by the favorable experience of many who have used the method of Ravaut, of giving neosalvarsan intravenously in concentrated solution, the author has tried still further reduction of the amount of water. He dissolves 0.3 to 0.6 gm. in 1 or 2 cc. of distilled water and injects it with a small syringe. More than 40 such injections have been made without any reaction, and with very satisfactory effect upon the disease. The solution is made by adding the water to the drug in the capsule in which the neosalvarsan comes, stirring with the needle of the syringe for a minute or two until a perfect solution is obtained, drawing up the solution through the needle, and immediately injecting. The author believes that this technique will greatly simplify the injection of the drug and suggests that

for the convenience of country doctors, who find it very difficult to keep constantly supplied with freshly distilled water, a capsule of sterile distilled water be included in the neosalvarsan outfit.

(*Ibidem*, July 29, 1913, lx, No. 30.)

BURNS TREATED BY THE ROVSING METHOD. OVE WULFF, p. 1651.

The 60 cases of burns of various degrees treated by the Rovsing method between 1905 and 1912 are reviewed. The method consists of a thorough cleansing with soap and water and a brush, followed by an alcoholic solution of sublimate. If necessary, an anæsthetic is given for this procedure. Then the areas are covered with sterile fenestrated gutta-percha paper, and this with 1% silver nitrate gauze and then absorbent cotton. This dressing protects from the air enough to prevent pain and is easily changed without disturbing the tender new epithelium.

In none of the non-fatal cases, 8 of which were children, did contractures occur. Very few cases had any fever; only those which were infected before entering the hospital. The fatal cases often showed a subnormal temperature soon after the accident.

In contrast to the experience of Sonnenburg, who believes that albuminuria is a rarity in severe burns, the author found albumin in 5 of the 6 fatal cases in which he was able to get a urinalysis. On the other hand, of the 49 non-fatal cases reviewed, only 2 had albuminuria. The author is convinced that albuminuria is a valuable prognostic feature.

LUETIC PERNICIOUS ANÆMIA. J. WEICKSEL, p. 1663.

A case of pernicious anæmia (reported in No. 21, this volume of the *Muenchener medizinische Wochenschrift*) is again reported. After a positive Wassermann had been found, two intravenous injections of salvarsan, 0.5 gm. each, were given. Two months after the second dose, a sudden marked improvement occurred and the patient was apparently restored to health. As the serum reaction became negative it was hoped that a cure of the lues and the anæmia had been effected; but six months later the anæmia recurred and death followed in less than two months. The post mortem showed only the usual findings of pernicious anæmia. The author acknowledges that the striking improvement was in all probability only one of the remissions common to pernicious anæmia, and only coincident, not consequent, to the improvement in the lues.

(*Ibidem*, Aug. 5, 1913, lx, No. 31.)

CONTRIBUTION TO THE RECOGNITION OF THE PYÆMIDES. WERTHER, p. 1709.

Under this name, suggested by Merk in 1909, the author includes all the skin eruptions due to metastases in the course of pyæmia. Merk classified them simply as erythema, purpura, erythemato-papular or nodular, pustular and vesiculo-pustular. The more complete classification of Lenhartz (in Nothnagel's *Handbuch*) is preferred.

1. Erythema, resembling erysipelas, especially over a deep inflammatory process, or when more superficial, large scarlet or small measles-like macules, or wheal-like lesions.

2. Hæmorrhages, often symmetrical and pre-agonal.

3. Vesicles, pustules and bullæ, the last often filled with blood and combined with erythema and purpura, or necroses and maceration of the skin, like that of a water-soaked corpse.

The pyamides are skin metastases of the original infective agent, or of a secondary infection, as the streptococcus purpuræ in diphtheria, skin abscesses in typhoid, etc.

The diagnosis is clear when the same organism can be demonstrated in the circulating blood and in the blood-vessels of the skin lesion. In many cases, however, all that can be demonstrated in the skin is the presence of thrombosed vessels. Here the clinical picture is our only reliance. High temperature, recrudescence of the skin lesions with rise of temperature and enlarged spleen, cutaneous or subcutaneous hæmorrhages and necrosis, even only to the extent of causing a central dimpling of the lesions, and accompanying infection of the intestinal mucosa, the respiratory tract, the kidneys and the serous membranes, are important aids to the diagnosis.

The author cites several cases, the last four of which he groups as a special type of pyamide. The eruption involves the flush area of the face in butterfly form, extending also to the ears, and the flexor surfaces of fingers and toes. Erythema, petechiæ, and irregular bullæ with cloudy blood-stained contents, with accompanying œdema make up the clinical picture. At the angles of mouth and eyes are bleeding cracks; the lips are covered by crusts.

One of these four cases after four months' illness recovered, following drainage of the ethmoidal sinus.

The importance of recognizing the pyamides lies in this possibility of finding and removing the source of infection.

A NOTEWORTHY DEATH AFTER SALVARSAN. J. KROEL, p. 1712.

Following a chancre in 1882 the patient had no skin eruption, and therefore took no treatment; 16 years later, the onset of tabes was heralded by an apopleptic attack, and progress of the disease was steady after that. In 1911, a fully developed case of tabes, he was given 0.4 gram salvarsan intravenously. A marked reaction with a temperature of 39.3° C. followed. Some improvement resulted, and the next 5 injections of 0.45 to 0.6 gram, intravenously, were well borne. Between the 6th and 7th injections, over a year intervened. The 7th injection, 0.6 gram, was smoothly borne; but 8 days afterward the pulse became irregular and a large sugillation appeared in the lower abdominal wall. Excitability and severe attacks of coughing were followed by confusion and loss of consciousness, weak respiration and fluctuating pulse and temperature. After a few slight convulsions and consequent coma, he died, three weeks after the salvarsan injection.

The post-mortem showed no hæmorrhagic encephalitis, and no kidney lesion of any consequence.

The author remarks that Wechsellmann's theory fails in this case, for there had been no previous treatment with mercury, and there were no signs of insufficiency of the kidneys.

The case belongs in that class of arsenic poisoning resembling, symptomatically, carbonic oxide poisoning. It is remarkable because of the immense hæmorrhage in the rectus muscle, causing necrosis, and the late onset of the toxic symptoms.

(*Ibidem*, Aug. 26, 1913, ix, No. 34.)

OBSERVATIONS ON LIVING SPIROCHÆTÆ. MEIROWSKY, p. 1870.

The author stains the living spirochætæ with borax methyl-violet solution. The moist smear, carefully sealed, can be studied for days before the organisms die. As a result of his study of spirochætæ from cultures and from lesions of lues, he describes a process of budding at the ends or sides of spirochæta pallida, which he believes is one method of propagation. Not only single buds, but two and multiples of two, up to many. They may divide before or after separation

from the parent organism, and from each bud is given off a spiral process which develops into a new spirochæta.

He believes that he has observed the life cycle of the spirochæta pallida. If it is finally proven that the spirochætæ are animal organisms, then this is a form of asexual propagation. If they belong to the vegetable kingdom these buds are really spores. Until more is known about the organism it is best to retain the non-committal name "bud."

He has observed, in the very young forms, granules staining more deeply than the rest of the spiral, and suggests that this may be the resting stage of the organism.

(*Ibidem*, Sept. 3, 1913, lx, No. 35.)

DEMONSTRATION OF SPIROCHÆTÆ PALLIDÆ IN THE BRAINS OF GENERAL PARETICS BY ANIMAL EXPERIMENT. HANS BERGER, p. 1921.

In 20 inoculations of brain tissue from 20 cases of general paresis into rabbit testicles, the author succeeded in 3 cases in getting a growth in which he could demonstrate the spirochæta pallida. The little plugs of brain substance were removed by an operation which was followed by serious results only in one case. This patient proved to be hæmophilic and died five days later, as a consequence of hæmorrhage from the cortical vessels.

The three cases from which successful inoculations were made differed in no way from the others. All were well defined paretics.

THE COMPLEMENT-BINDING REACTION WITH THE CEREBRO-SPINAL FLUID OF CARCINOMA PATIENTS. VON DUNGERN and HALPERN, p. 1923.

The authors used as antigen an acetone extract of the red blood cells of a paralytic, making also a control reaction with heart extract antigen. In most of the cases the blood serum was tested after the methods of both Wassermann and Von Dungern. In the 5 cases of carcinoma examined, the spinal fluid gave a positive reaction with blood antigen, a negative with heart antigen. All cases of syphilis which gave positive or doubtful reactions with blood antigen gave positives with heart antigen. Other diseases all gave negatives. They are hopeful of establishing that a positive test in the spinal fluid with blood antigen, in the absence of a positive with heart antigen, means carcinoma. They believe that their findings show that in spite of no clinical evidence of metastases, the disease produces signs in the spinal fluid. Von Dungern has already suggested that carcinoma may yet be found to be a general infection, though as yet there is no proof of this.

TREATMENT OF MALIGNANT TUMORS. LUNCKENBEIN, p. 1931.

The author believes that the treatment of malignant tumors with tumor autolyzates is able to cause definite improvement in the local and also in the metastatic growths. It promises to be of assistance to radiotherapy in a class of cases which has been regarded as hopeless. Just where radiotherapy fails, in the gland metastases, the autolyzate treatment has its best effect.

His technique follows that of Rovsing. A tumor or part of a tumor or glandular metastasis, under strict asepsis, is minced, shaken in normal salt solution for an hour or two, kept on ice 3 days, filtered through 5 or 6 thicknesses of filter paper and the filtrate heated to 56° C. for an hour. As the initial dose he injects subcutaneously 1 cc., later increasing to 5 and then to 10 cc. As the extract ages it weakens, so that doses of 15 or 20 cc. are necessary.

After these injections the patient suffers a painful reaction on the part of the tumor or metastasis, coming on in about 3 hours and lasting almost 24 hours. There are no general disturbances except slight rise in temperature, especially after the first dose. He ascribes the beneficial effect to the stimulation of the tissues and to the formation of special tumor-destroying ferments such as are responsible for the Abderhalden tests.

The author has also tried with benefit the injection into the abdominal subcutaneous tissue, in cases of abdominal carcinoma, of 20 to 30 cc. of the patient's own ascitic fluid. This injection was made without entirely withdrawing the needle after tapping.

He has seen similar improvement follow the same procedure in tuberculous peritonitis, and suggests that possibly the surprising improvement seen sometimes after operation may be due to the accidental production of such auto-serotherapy.

(*Ibidem.* Sept. 9, 1913, No. 36.)

THE COMBINED LOCAL AND GENERAL TREATMENT OF SYPHILIS
OF THE CENTRAL NERVOUS SYSTEM. H. F. SWIFT and A. W.
M. ELLIS, p. 1977.

With the idea that the unsatisfactory general treatment of the various forms of syphilis of the brain and cord might be greatly improved by direct intraspinal therapy, the authors tried on apes the intraspinal injection of salvarsan and neosalvarsan, but found them both too irritating for safety. The unfavorable experience of Marinesco also made them unwilling to follow up this method.

They proved by experiments with the spirochætae of recurrent fever that the blood of patients treated with salvarsan intravenously possesses a distinct spirochæticidal action, enhanced by heating to 56° C. for a half-hour. Culture medium made after Noguchi's method with blood of patients who had received salvarsan, gave very slight growth of *spirochæta pallida*, while medium made with blood of the same patients before injection, gave a good growth.

Following Marinesco and Robertson, each of whom had tried on very few cases the intraspinal injection of salvarsanized serum, the authors have followed the results on a large series of cases for over two years, and report in detail the course of a number of selected cases. The condition of the spinal fluid improved in nearly all cases of tabes and cerebro-spinal syphilis and in many the symptoms were markedly lessened.

To show that the results were due to the local, rather than to the intravenous treatment, they treated four cases with intraspinal injections only of serum from other cases under treatment. They all showed marked improvement.

A NEW LEUKÆMIA, A TRUE TRANSITIONAL CELL (SPLENOCYTE)
FORM, AND ITS INFLUENCE ON THE INDEPENDENT EXIST-
ENCE OF THESE CELLS. H. RESCHAD and V. SCHILLING, p. 1981.

A case of acute leukæmia is reported in which the large mononuclear and transitional forms of leucocytes were in overwhelming majority.

The papular ecchymotic skin eruption which was one of the first and most constant symptoms, was also caused by an infiltration made up almost exclusively of these cells. As they found the oxydase reaction consistently negative in these cells, as in the large mononuclears and transitional cells of normal and of malarial blood, the authors claim this as a pure transitional form of splenocyte leukæmia, and believe that the independent character of these cells is supported strongly by this case.

THE FIRST BIOLOGIC RADIUM EFFECT. WALKHOFF, p. 2000.

Nearly all the writers on radium give Becquerel credit for the first report on the biologic action, on the basis of his description, in 1901, of his accidental radium dermatitis.

Walkhoff, in an address in Munich in 1900 on Invisible Photographic Rays, reported having obtained from 2 exposures of 20 minutes each, a dermatitis lasting several weeks, and exhibiting the same characteristics as an X-ray dermatitis. This lecture was reported in the *Photographische Rundschau* in October, 1900, and referred to on page 39 of the *Grundriss der Radiumtherapie*, by Löwenthal. He therefore claims priority.

(*Ibidem*, Sept. 16, 1913, lx, No. 37.)

THE SKIN REACTION WITH NOGUCHI'S LUETIN IN PARETICS.

L. BENEDEK, p. 2033.

In 80.4% of 81 cases of general paresis the author obtained a positive reaction to luetin; 3 cases of cerebro-spinal syphilis all gave very strong reactions with an oedematous areola, 4 cm. or more in diameter, on the fifth day, and going on to bulla formation. He saw nothing like this in the 65 positives in paresis, and thinks that this difference in the strength of reaction can be used in differential diagnosis.

In one case of latent lues he obtained a weak positive, and of 10 cases of dementia præcox, used as controls, he saw a weak positive in one. He was unable to observe a reversal of a negative Wassermann to positive or the strengthening of a weak positive, as reported by Mueller and Stein, 12 to 14 days after the injection of their extract of luetic organs. He also saw no such erysipelas-like reaction as they report.

The histological examination of one of the severe reactions of cerebro-spinal lues showed an infiltration about the hair follicles and sweat glands, made up of leucocytes, round and epithelioid cells, the latter grouped between the young connective tissue cells. A few giant cells of the Langhans type were present. The blood vessels showed no changes. The article is illustrated with four color plates of the skin reactions and with cuts of microphotographs.

REPORT ON EXPERIMENTAL SYPHILIS OF THE NERVOUS SYSTEM.

A. JAKOB and W. WEYGANDT, p. 2037.

The authors injected an emulsion of syphilitic rabbit testicle into the veins of rabbits and into the spinal canal and cerebral cortex of apes and rabbits, as well as making testicular inoculations in both species. Owing to the short time since the research began, the present paper concerns itself only with the findings in rabbits inoculated intratesticularly or intravenously. The histological findings in the nervous system of these animals vary from strictly localized foci to diffuse infiltrations affecting cerebro-spinal membranes, cortex and nerve trunks. The neighborhood of the spinal ganglia is a favorite location, as Steiner has already shown.

The blood vessel changes play a principal rôle in the process, the nervous tissue suffering from direct pressure or from lack of nutrition, secondary to vascular incompetence. The infiltrating cells are principally lymphocytes, plasma cells, and the polyblasts of Maximow, small chromatin-rich round cells with a distinctly basophilic protoplasm. Giant cells are found now and then, mast cells are few.

They conclude that animal syphilis, even when apparently limited to the testicle, tends to become generalized and shows a special attraction for the nervous system. In their considerable experience in the normal histology of the rabbit's nervous system, and in the histology of other pathological conditions,

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they have found nothing similar. Their report on the search for spirochætæ in this material will follow, as they are allowing their material plenty of time in preparation for staining, as Noguchi advises.

OBSERVATIONS ON LIVING SPIROCHÆTÆ. MEIROWSKY, p. 2042.

In continuation of his article in No. 34, p. 1870, of this same volume, the author reports that with the dark field condenser he was able to confirm fully his findings with the vital staining method. The same buds at the sides or ends of the organism and the same umbels at the ends were seen. Out of these umbels, buds separated and could be observed in all stages of development up to the full grown spirochætæ. Besides this, the side buds were seen to cause a lashing movement in their vicinity, entirely independent of the motion of the parent organism.

Similar findings have been described by Tomaczewski and Noguchi. That these appearances are not particles of culture medium can be easily shown by their relatively high refractive index, greater than that of the spirochætæ, which in turn are easily distinguished from the culture medium by their higher index of refraction.

Similar results were obtained by careful observations of cultures of the spirochætæ of balanitis and stomatitis.

These buds and developing spirochætæ, found regularly in cultures and with difficulty in the organisms obtained directly from the lesions, the author interprets as steps in the process of propagation.

From his observation of them and of the straightened and segmented forms which he has noted, he claims that the spirochætæ are probably vegetable organisms and that the budding process is really sporulation. Whether this conclusion is justified or not, the article is of great interest.

THE COMBINED LOCAL AND GENERAL TREATMENT OF SYPHILIS OF THE CENTRAL NERVOUS SYSTEM. N. F. SWIFT and A. W. M. ELLIS, p. 2054.

In conclusion of their article begun in No. 36 of this volume, p. 1977, the authors give case histories showing that while the intraspinal injection of normal human serum has some beneficial effect on tabes, the use of salvarsanized serum has a better and more lasting effect, and the combined treatment is still more beneficial. They give the results of the combined intravenous and intraspinal treatment in 32 cases of tabes, cerebro-spinal syphilis and general paresis. All showed improvement in the character of the cerebro-spinal fluid after from a month's to a year's treatment, and several gave normal tests after a few months. Improvement in the symptoms was less constant, but still much greater than that obtained by other methods.

They value very highly a quantitative estimation of the strength of the Wassermann reaction in the spinal fluid as an index to the progress of the case. They believe that their method will be found an addition of great value in the treatment of these cases.

(*Ibidem*, Sept. 23, 1913, lx, No. 35.)

EXPERIENCE WITH THE CHEMICO-PHYSICAL METHODS OF TREATMENT OF CANCER IN THE SAMARITAN HOUSE. (CZERNY'S INSTITUTE FOR CANCER RESEARCH, HEIDELBERG.) R. WERNER, p. 2100.

The thorough trial given the treatment of cancer by toxins and ferments was almost without results. Coley's fluid was the only toxin that gave results,

and it was active in only a small percentage of the sarcomata, and only with strong general reaction. The ferments acted only by local application, with slight effect.

Of electrical methods, both fulguration and scintillation have been of value for superficial effect only, and tend to stimulate the growth of any undestroyed tumor tissue.

Diathermia has been used for its local caustic effect with results more prompt but less elegant, from the cosmetic standpoint, than the results of radiotherapy. In larger tumors it is useful only to destroy infected surfaces, or to clear the way for radiotherapy by removing the surface of the growth. But here, even, there is risk of irritating and hastening the malignant growth.

On the basis of his previous work, showing that heat increases the sensibility of tumor tissue to radium, the author used diathermia in conjunction with radiotherapy on 18 far-advanced cases, with apparent hastening of growth rather than benefit. He is not convinced that it is of no value, but warns that the subsequent radiotherapy must be sufficient to destroy the whole growth, if the detrimental effect is to be avoided.

The electric arc (Forest needle) is useful within rather narrow limits. It is in some respects better than the thermo-cautery.

Radiotherapy has proven in his hands greatly superior to the electrical methods. He uses large doses, cross fire, and heavy filters—3 mm. aluminium for Roentgen rays and 2 to 3 mm. lead for radium and mesothorium. Without filtering, the results on superficial epitheliomata were very satisfactory from the cosmetic standpoint, but recurrences must be watched for.

The surgical exposure of intraperitoneal tumors to direct raying, anchoring them into incisions in the abdominal wall, was very successful with comparatively small dosage. But of course this is not applicable in case metastases have already formed. Care must be exercised to prevent perforation of the wall of the stomach or intestine so exposed, as a result of too heavy dosage and too rapid absorption of the tumor.

The intravenous and intratumoral injection of thorium X, and the intravenous injection of cholin salts have assisted, to some extent, local radiotherapy. The author uses the boric salt of cholin regularly with radiotherapy in all carcinoma cases except the very superficial. He believes that the injections repeated regularly for weeks, increase the effect of the later radium applications very markedly.

The results of an increased dosage of rays up to 10,000 to 20,000 milligram hours of mesothorium, and 100 to 200 X of Roentgen rays, of 10 to 12 Wehnelt hardness, has been only a limited improvement on the former much milder dosage. The great difference in susceptibility of the various carcinomata, the tendency to cyst formation instead of to replacement by scar, and the possibility of hæmorrhage or perforation of hollow viscera, make the results of radiotherapy impossible to predict, and limit sharply the amount which can be safely given. The author believes that the effort to increase the susceptibility to the rays, by intravenous injection of the boric salt of cholin (enzytol), is a more hopeful direction in which to work. He uses 2 to 3 cc. of 10% enzytol to 30 cc. normal salt for intravenous injection, repeated almost every day, for from 3 to 4 weeks, cautiously increasing the dosage up to 30 cc. of the drug (10%) in 100 cc. salt solution. No lasting reaction was observed, but after any disturbance greater than a temporary congestion, salivation, lachrimation and dizziness the dose is not increased. Occasionally temporary anorexia, malaise, nausea and pain in the tumor were noticed. Neurin, recommended by Adamkiewicz, the author thinks too toxic.

He believes in surgical removal of the tumor wherever possible. Most of his cases have, however, been inoperable, or recurrences after operation. Of about 300 such, half of them have received benefit in improvement of symptoms or

lessened size of the tumor. He cites a number of cases in which the benefits were especially noteworthy, and points out that with the combined therapy, the amount of rays necessary was markedly less. He warns against assuming that we yet have any sure cure for the deep carcinomata, for the recurrences after radiotherapy often seem much more resistant to treatment than was the original tumor.

A NEW ADDITION TO RADIOTHERAPY. N. KRUKENBERG, p. 2112.

In order to intensify the action of the rays of higher penetration, the author tried injecting into frogs a suspension of the calcium salt of wolframic acid, which is insoluble in water, normal salt solution and alcohol, as well as intensively fluorescent, giving off many very highly actinic ultra-violet rays. A frog, injected into the lymph sac with this salt, and exposed to X-rays, became visible in a dark room, glowing with a bluish-white light. The injected part of a rabbit's ear glowed almost as brightly after 30 days, as at once after the X-ray exposure.

He then injected 0.4 gm. calcium wolframate suspension into a carcinomatous breast, gave 3 X-ray exposures on successive days, and on the fourth day removed the breast. Microscopically the neighborhood of the wolframate showed necrosis and cell degeneration, the rest of the tissue showing no change.

Two guinea pigs were inoculated in the peritoneal cavity with tuberculous sputum; 22 days afterward, one was given 1.0 gm. calcium wolframate in the peritoneal cavity, and both were exposed equally to X-rays. The post-mortem showed that the animal which did not receive the fluorescent salt had a much farther advanced tuberculosis than the other, apparently a beneficial action of the reinforced radiotherapy being here exhibited.

(*Ibidem*, Sept. 30, 1913, lx, No. 39.)

THE STIMULATING EFFECT OF ROENTGEN RAYS ON ANIMAL AND VEGETABLE GROWTH. E. SCHWARZ, p. 2165.

To prove that small doses of X-rays have a stimulating effect on developing plants and animals, the authors exposed ordinary beans in separate lots to X-rays at 20 cm. distance, for various lengths of time.

These beans and unexposed controls were then planted and kept under the same conditions. The beans which had received approximately $\frac{1}{12}$ X grew remarkably fast, so that in 3 weeks they were about twice the size of the controls. Twice this exposure was distinctly harmful, stunting instead of stimulating growth.

The experiment repeated with beans that were sprouting, and again with dry beans kept 4 weeks after exposure before being planted, gave the same results. Beans planted 8 weeks after exposure, however, showed much less effect.

A somewhat longer exposure of eggs of *Ascaris Megalocephale* gave a distinct hastening of their development. Exposure of granulating ulcers over half their surface caused a distinct hastening of epithelial growth on the exposed half, over that on the surface not exposed. Similar experiments on parts of rabbit ears, from which the skin had been sliced off or cauterized, gave like results.

EXPERIMENTAL, HISTOLOGICAL AND CLINICAL RESEARCH ON TUMORS. G. FICHERA, p. 2176.

In reference to the articles of Ehrhardt and Lunckenbein in Nos. 27 and 35 of the *Münchener medizinische Wochenschrift*, the author claims that all the work with autolysates of malignant tumors reported by Ehrhardt and Luncken-

hein as new, has been known since 1910 in reports by the author himself and his results confirmed by Daels, Deleuze and Cimoroni.

(*Ibidem*, Oct. 21, 1913. lx. No. 42.)

THE INJECTION OF CONCENTRATED SOLUTIONS OF OLD SALVARSAN WITH THE SYRINGE. G. L. DREYFUS, p. 2333.

Stern, in discussing the use of concentrated solutions of neosalvarsan, mentioned incidentally that old salvarsan could be given in a similar way, 0.3 gram in 10 cc. solution. Very soon afterward, Zimmern¹ reported unpleasant reactions occurring often after the intravenous use of a 5% solution. He also reported a slower excretion of the drug when given in concentrated form, and therefore an increased action. The author therefore has adopted a modified technic, and for a year and a half has given the drug in approximately 1% solution in sterile distilled water. As his maximum dose is 0.4 gram, he is able to inject the whole quantity with a large all-glass syringe. A detailed description of the technique is given. After 320 injections made in this way, the author is able to state that the concentrated solution is better borne than the more dilute solution. Only six times did a reaction with temperature over 37.8° C. occur, and only fourteen times were there general symptoms, vomiting, cyanosis or chills.

A careful supervision of the urinary findings gave in no case more than a temporary slight albuminuria with very few hyaline casts. A number of the cases gave these urinary findings before the injections, and in none of them were the findings made worse by the injection. In spite of this, however, the author recommends that in cases needing salvarsan, in which there is considerable albuminuria and cylindruria, the old technique of dilute solution be followed.

In cases of syphilitic lesions of the circulatory system, he recommends very small doses of salvarsan, or better neosalvarsan, in concentrated solution.

INTRAVENOUS INJECTION OF CONCENTRATED NEOSALVARSAN SOLUTION. T. KATZ, p. 2337.

The author reports a series of cases of primary syphilis treated by the Ravaut method and the effect on the spirochæta pallida carefully watched. Without exception the organisms were much fewer, many dead, the living very sluggish, eight hours after the injection. Twenty-four hours afterward, they were gone. This, whether the dose had been 0.3 gram or 0.6 gram of neosalvarsan. In many cases the primary lesion began to heal on the day after the injection.

Because of its simplicity of technique and efficiency of action upon the spirochætæ, the lesions and the Wassermann reaction, he recommends very highly the use of the concentrated solution.

HEART BLOCK IN THE COURSE OF SALVARSAN TREATMENT OF A CASE OF LATE SECONDARY LUES. H. FRENZ, p. 2339.

Lues is an important factor, perhaps the greatest, in the disturbances of the bundle of His. A man of 39 who had had lues for eighteen years, received as treatment for multiple luetic periostitis and luetic iridocyclitis, three intravenous injections of salvarsan and two intramuscular injections. In about three months he thus received 1.7 grams intravenous and 0.6 intramuscular. The day after the third intravenous injection of 0.5 gram he began to complain of pain and

a feeling of pressure in the chest, and on the second day the pulse rate had decreased from 80 to 50, and a rapid pulsation was noticed in the jugulars.

The diagnosis of heart block was established by the electro-cardiogram. The disturbance lasted a week. Then the normal condition was re-established, and in a couple of weeks an injection of 0.5 gram, intravenous, was given without any reaction.

The author explains the disturbance as probably due to toxins liberated by the destruction of a luetic focus in the neighborhood of the bundle of His, and the consequent inflammatory reaction. He suggests that there is a striking analogy between this case and heart block in the convalescence from diphtheria, pneumonia and typhoid, and that it may be possible to explain these cases by the same hypothesis; i.e., of toxins set free by increase of natural resistance or by therapeutic measures.

ERRATUM.

We exceedingly regret that we omitted to add to the complimentary review of Dr. J. C. White's autobiography, which appeared on page 606 of the August issue of *THE JOURNAL*, that the book was privately printed and is not for sale.

THE JOURNAL OF CUTANEOUS DISEASES

VOL. XXXII

OCTOBER, 1914

NO. 10

COLLOID DEGENERATION OF THE SKIN, WITH REPORT OF A CASE OF SO-CALLED COLLOID MILIUM.*

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THE disease to which Wagner first called attention in 1866, and to which he gave the misleading name colloid milium, belongs among the rare affections of the skin. In the forty-eight years which have elapsed since it was first described, but 22 cases have been recorded; and in a relatively large number of these the correctness of the diagnosis may very well be questioned: indeed, it is quite certain that some of them were not colloid degeneration of the skin.

The reported cases may be conveniently arranged in three groups, according to their symptoms and histopathology. In the first and largest may be placed those which correspond more or less closely, in their clinical features, with Wagner's case and with the cases of Besnier and Feulard, in their histopathology, as described by Balzer. These are the cases of Wagner, Besnier, Feulard, Perrin, Pouget, Jarisch (his first case), White, Hyde, Bosellini (two cases), Pelizzari, La Mensa and Lombardo. In a second group may be included the three cases of Jarisch (his second case), Bizzozzero and Arzt, in which the clinical symptoms differ more or less decidedly from those present in the first group, but in which the histopathology is practically the same. The last group comprises those cases in which neither the clinical symptoms nor the histopathology correspond with either of the two preceding groups; here belong the cases

* Read before the 38th Annual Meeting of the American Dermatological Association, Chicago, Ill., May 14-16, 1914.

of Fox, Philippon, Petrini de Galatz, and perhaps the three cases of Liveing, in which no microscopic examination of the lesions was made.

In the cases of the first group there were numerous pinhead- to hemp-seed-sized, firm, brownish-yellow to lemon-yellow, translucent, discrete and confluent nodules, resembling vesicles, situated for the most part on the face, most abundantly upon the malar eminences, the bridge of the nose and the lower part of the forehead, just over the brows; less frequently the ears and the backs of the hands were the seat of similar lesions. Although they closely resembled vesicles in appearance, they did not contain fluid, but a transparent, jelly-like substance. In four of the cases—those of Feulard, Perrin, Pelizzari, and Bosellini—the conjunctiva was also affected; in Feulard's case a yellow streak ran transversely over the cornea, while in the others there were thickened yellow patches on the ocular conjunctiva, resembling pterygium. In one of Bosellini's cases there were lesions on the mucous membrane of the lower lip, similar to those upon the skin. One-half the patients were over 40 years of age, and had in most instances been much exposed to the weather, so that there was decided pigmentation of exposed parts. Two of the cases, however, those of Bosellini, occurred in two brothers, aged respectively 9 and 12 years; these are the only cases thus far observed in children, and in two members of the same family. In three of the cases the lesions in time disappeared spontaneously; in Feulard's the patient stated that when he was a youth, 15 to 16 years old, he had had a similar eruption upon the hands, which had disappeared little by little. In the great majority, however, the affection, when once established, remained stationary indefinitely. In none of the cases were there any subjective symptoms worthy of note.

No microscopic study, beyond an examination of their jelly-like contents, was made of the lesions in Wagner's case; and the disease was thought to be an affection of the sebaceous glands, an unusual form of milium. The histopathology of the malady was first described by Balzer, who studied the cases of Besnier and Feulard. He found the epidermis greatly thinned, which he believed to be the result of pressure from below, but observed no noteworthy alteration of its cells. The principal changes were found in the upper part of the corium, the papillary and subpapillary layers of which were replaced by amorphous colloid masses, separated, in most instances, from the overlying rete by a slender band of connective tissue; but in the larger masses this fibrous tissue had completely disappeared, so that they were directly overlaid by the epidermis.

PLATE XLIII.—To Illustrate Article on Colloid Degeneration of the Skin
(published in October issue), by M. B. HARTZELL, M.D.

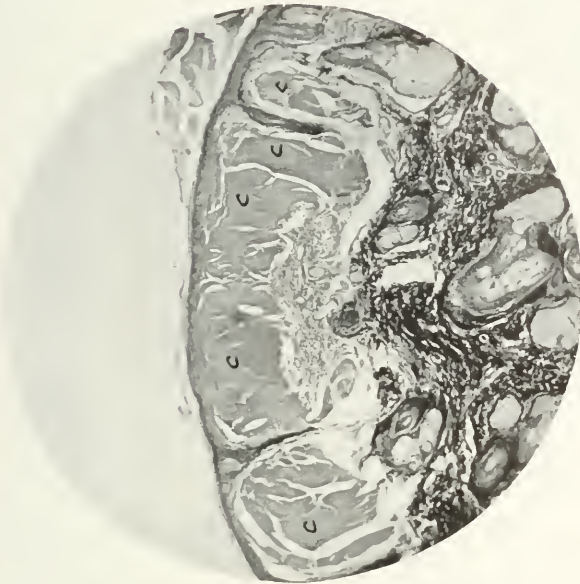


Fig. 2.
c. Colloid replacing upper portion of corium.

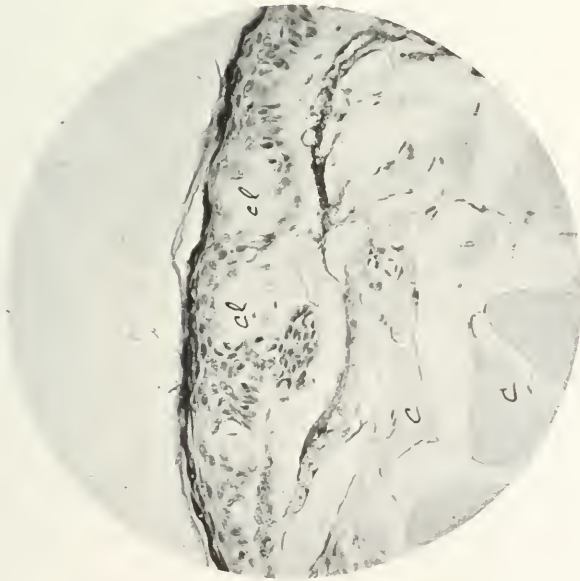


Fig. 1.
cl. Areas of colloid degeneration in the epidermis.
c. Colloid degeneration of the corium.

The degeneration of the corium occurred in two forms, an early and a late one. In the earlier the fibres of the invaded region retained their usual appearance, but were altered in their reaction to stains; in the later the fibres became less distinct, less wavy, and were finally agglutinated into amorphous blocks. In many places the external coat of the blood-vessels was invaded by the degeneration, and the endothelium was swollen. These lesions of the vessels were seen, not only in the neighborhood of the colloid masses, but in places where there were no other signs of disease. About the vessels in the subpapillary part of the corium there were small accumulations of round cells. In sections treated with eosin and potassa, the integrity of the elastic tissue seemed to be demonstrated. The sweat and sebaceous glands presented no evidences of degeneration. From his study of these two cases, Balzer concluded that the lesions were the result of colloid degeneration of the connective tissue of the derma, which at first caused swelling of its fibres and later agglutinated them into amorphous masses which replaced the papillæ and compressed the overlying rete mucosum. He especially emphasized the fact, noted by most later observers likewise, that the cellular elements, not only of the epidermis, but of the glands and of the connective tissue, seemed to have escaped entirely the pathological changes which had so markedly altered the fibrous tissue. He was of the opinion that the disease began in the vessels, an opinion supported by the observation that degeneration of the vessel-walls was in places the only alteration discernible.

Balzer's observations have been confirmed by practically all those who have since studied the disease, and but little of importance has been added to his description of its histopathology. Reboul, who examined the case reported by Perrin, found the walls of the vessels of the derma and hypoderm much thickened, especially the external coat, in which the connective tissue had undergone colloid change. He likewise found thickening of the external sheath of the nerves, but the nerve fibres themselves were not changed, the only observation of the kind recorded. White found the areas of colloid material surrounded by a zone of elacin, and he, too, noted the immunity of the connective tissue cells in the midst of the degenerated masses. He was unable to demonstrate the change of elastin into collastin, which, according to Unna, is one of the steps in the formation of colloid; he attributed his failure, not to faulty technique, but to the absence of this substance, owing to completion of the degeneration. Bosellini is the only observer who found any evidence that the

cells of the epidermis may share in the degeneration. He noticed that some of the cells of the rete presented a homogeneous appearance, as if they had been penetrated by colloid substance. Another interesting observation made by this author was, that in sections of the skin apparently sound the distribution of the elastin was quite irregular, and in certain areas entirely absent.

All the foregoing cases presented clinical features and a histopathology so uniform and so much alike that they must be regarded as examples of one and the same disease, representing a distinct clinical entity.

In the three cases which I have placed in the second group, those reported by Jarisch (his second case), Bizzozero and Arzt, there was not only a lack of uniformity of symptoms, each case presenting peculiarities of its own, but the macroscopic appearances of the lesions differed more or less decidedly from those characterizing the cases of the first group. In the one which Jarisch reported at the Fifth Congress of the German Dermatological Society, under the name *colloidoma ulcerosum*, the left ear was the seat of an ill-defined swelling, occupying the tragus, antitragus and wall of the external auditory meatus, covered with scales and crusts, beneath which were numerous small, crateriform ulcers which had begun as yellowish, "honey-like," translucent nodules. A microscopic examination of sections of the nodules demonstrated the presence of colloid degeneration. Neisser, however, in the discussion which followed the presentation of the report, expressed the opinion that the lesion was probably syphilitic, the colloid degeneration being a secondary process. In Bizzozero's case the disease was limited exclusively to the muco-cutaneous border of the nostrils where there were a number of very small, opaque lesions, the color of the normal skin, with fine vessels running between them. Upon section, many of these were found to have a small pedicle. The microscopic features were those characteristic of colloid degeneration of the skin, differing in no essential particular from those already described. Very recently, Arzt has published a case under the name *pseudo-milium colloidal*, in which there were two small, pale-brown, translucent tumors, the larger with uneven surface, situated upon the right ala of the nose. These slowly increased in size, and in the beginning bled frequently. Microscopic examination of sections of the tumors, both of which were excised, showed marked changes in the middle portion of the derma, similar to those observed in the earlier cases of so-called colloid milium. Arzt thought the changes concerned the collagen rather than the elastic tissue. Clinically this case resembles very little the

earlier cases reported, but its histopathology leaves very little doubt that it was an example of colloid degeneration of the skin.

In the third group of cases I have included those reported by Fox, Philippon, Petrini de Galatz, and with some indecision, the three of Liveing. Fox's case, in which he had made a provisional diagnosis of acute disseminate lupus, was examined microscopically by Elliot, who found "tissue of a decided tubercular character." The case reported by Philippon was the hydradenome eruptif of Jacquet, the syringocystoma of other authors, and was published in support of his view that this neoplasm is identical with colloid milium. The attempt of this author to identify the former of these two affections with the latter scarcely requires any serious consideration, since there is absolutely no relationship between them—they do not resemble each other either clinically or histopathologically. The case reported by Petrini de Galatz at the Fifth Congress of the German Dermatological Society as one of colloid milium associated with recurrent hydroa, was quite certainly not colloid milium, but was an example of the milium-like cysts which occasionally form at the site of the blebs of pemphigus and possibly other bullous diseases—it presented neither the clinical nor microscopic features of true colloid milium. The three cases published by Liveing, in which no microscopic examination was made, presented a number of small, yellowish, translucent tumors, scattered about over the face, neck and upper arm, in many of which a crater-like excavation formed, accompanied by inflammation and crusting, followed eventually by the disappearance of the lesions. The author himself noted the resemblance of these changes to those occurring in molluscum contagiosum, but did not regard the general appearances as characteristic of that affection. Although, in the absence of any microscopic study of the cases, no definite opinion can be formed, it does not seem as if they properly belong to colloid degeneration of the skin. Indeed, it is not probable that any of the cases of this last group were examples of colloid milium, but they have been considered here only because they have been published under that title.

To this short and very slowly growing list of cases of colloid disease of the skin I desire to add a new and quite typical one.

CASE REPORT.

In September, 1913, a man, 43 years old, a florist by occupation and consequently much out doors, came to the Skin Dispensary of the University Hospital for advice concerning an affection of the

skin occupying the face and limited exclusively to that region. Over both malar eminences, extending thence over the bridge of the nose, were many pin-head to shot-sized, discrete and confluent, firm, rather flat, translucent elevations of irregular shape, which gave to the affected area a distinct lemon-yellow color. Although the lesions looked very much like small vesicles, they did not contain fluid, but instead a pale-yellow, transparent, jelly-like material. The lower lip at the junction of the skin and mucous membrane was also slightly, but distinctly, of a yellowish hue, but no elevations were present in this region. There were no subjective symptoms, the patient seeking treatment only because of the rather conspicuous yellow color of the region affected, a color which, according to his statement, became much exaggerated in the summer, making the face look, to quote his own words, "as if it had been smeared with yellow clay." The disease had lasted three years, and had changed but little recently.

Microscopic study was made of a lesion removed from the right malar region. The epidermis was everywhere thinner than normal, being reduced over the central portion of the lesion to two or three layers of flat cells. This thinning had taken place at the expense of the lower portion of the rete, the basal cells of which, together with some of the lower prickle cells, had in large part disappeared in many of the sections. In certain small areas in the epidermis a few contiguous prickle cells had undergone a degeneration which had transformed them into a homogeneous substance in which an occasional fragmented nucleus was faintly discernible; in other parts, all the cells of the lower half of the rete had fused together into a homogeneous mass in which were the remains of a few epithelial nuclei. This degeneration of the epidermis has been noted but twice before—once by Bosellini and once by Hyde, who found not only a few of the rete cells transformed into colloid, but likewise some of the cells of the ducts of the coil-glands, a unique observation. I call particular attention to this degeneration in the cells of the epidermis because most observers have emphasized the immunity of the cellular elements in this form of degeneration of the skin.

The chief histological alterations, however, were situated in the upper and middle portions of the corium. The normal structure of the papillary and subpapillary layers had completely disappeared, and was replaced by an amorphous, finely granular mass, staining a reddish-yellow with the picro-fuchsin mixture, throughout which were scattered a considerable number of well-preserved connective-tissue nuclei. This mass, which was broken up into small, irregular

blocks by numerous fissures, probably produced in cutting the sections, was divided by apparently normal hair follicles into several circumscribed areas, the smaller of which, situated in the peripheral part of the lesion, were separated from the follicles on their lateral borders, and from the epidermis above, by a narrow band of fibrous tissue; the largest of these areas, occupying the centre of the lesion, was in direct contact with the overlying epidermis, as the fibrous band had disappeared along the greater part of its upper border. About the borders of the colloid mass the corium, while still preserving its usual fibrous appearance, was, nevertheless, altered in its composition, since it no longer stained like normal collagen, but like colloid. The elastic tissue had everywhere undergone degeneration or had completely disappeared, except in the lowest part of the corium. In sections stained with elastin stains, such as acid orcein and resorcin-fuchsin, the band separating the colloid from the hair follicles and the epidermis was found to be composed largely of collastin, although containing some normal elastin fibres, especially in the peripheral parts of the lesion; while staining like normal elastin, it was coarsely granular in places, in others made up of short, ill-defined and broken fibres. In the corium bordering on the degenerated area, normal elastin was not demonstrable, but there was a considerable amount of collastin with some fibres of elacin. The only vascular abnormality noted was an increased number of dilated capillaries, about which was a moderate round-cell exudate, situated in the corium in the central part of the lesion, immediately beneath the lower border of the colloid mass. The hair follicles, the sweat and sebaceous glands showed no alteration.

To briefly recapitulate the principal changes noted, there were (1) a marked thinning of the epidermis with disappearance of a considerable part of the basal-cell layer and colloid degeneration of the prickle-cells in various places; (2) complete disappearance of the papillary and subpapillary layers of the corium and their replacement by colloid material; (3) varying degrees of degeneration and destruction of the elastic tissue.

There is considerable divergence of opinion among those who have studied this form of degeneration of the skin, as to where the degenerative process begins and as to what tissues it chiefly affects. Balzer, finding that the walls of the blood vessels exhibited signs of colloid degeneration, even in places where no other alterations were present, thought it probable that the degeneration began in the vessels of the derma. Jarisch, La Mensa and Pelizzari believe the malady a degeneration of the elastic tissue, the last believing, like

Balzer, that changes in the vessels precede the destruction of the elastin. Bosellini considers it a degeneration of both collagen and elastin; and he does not regard it as identical with senile degeneration of the skin. According to Unna, the process by which the colloid is formed is quite a complex one. It begins with alterations of both the elastin and collagen which soon unite to form a new substance, collastin, from which the colloid is produced. In addition, some of the elastic fibres are transformed into elacin which, however, takes no part in the formation of colloid, but unites with the collagen to form collacin, which is present in unusual abundance in this form of degeneration. It is the collastin and the colloid which, by their swelling, form the elevated lesions characteristic of the disease, the elacin and collacin being demonstrable only microscopically.

The careful study of the case which I have reported in this paper seems to me to have demonstrated quite conclusively that colloid degeneration of the skin of the type represented by the so-called colloid milium, is not a disease of the elastic tissue alone, as some have maintained, but that it affects the collagen and elastin in an equal degree; and it has demonstrated beyond question that the cells of the epidermis may share in the degeneration, although, judging from the observations of other authors, this is probably infrequent.

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DISCUSSION.

DR. GEORGE HENRY FOX, speaking of the case of so-called colloid milium to which Dr. Hartzell had referred, said that at the time he saw the case he made a

diagnosis of acute disseminate lupus. He was convinced that it was not one of true colloid degeneration, but that clinically the case resembled those described by Liveing and others under that name. The tumors on the face were very similar to lupus, and upon microscopical examination the tubercle bacillus was found. In similar cases which Dr. Fox saw later, the tumors were soft and of a cystic character, bleeding profusely when curetted. These cases were almost forgotten when Dr. Schamberg presented his paper on acnitis, and showed cases which were identical to the ones that he had reported under the name of so-called colloid milium.

DR. CHARLES J. WHITE said that in the case which he reported some years ago the lesions were larger and less numerous and of longer duration than in that described by Dr. Hartzell, but the histological findings were almost identical.

DR. HARTZELL, in closing, said the changes observed in the elastic tissue in these lesions were by no means uniform, so that even in the same section one might find all degrees of alteration in the elastic fibres.

THE USE OF CALCIUM LACTATE IN THE TREATMENT OF CERTAIN DERMATOSES.*

By CHARLES J. WHITE, M.D., Boston.

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ABOUT the time that Sir Almroth Wright first wrote about the opsonic treatment of disease, one of his pupils, Dr. Ross, of Toronto, gave a talk to the staff of the Massachusetts General Hospital on the use which Wright was making of calcium salts in the treatment of urticaria, purpura and sick headache. Ross gave us the following prescription:

R Tr. capsic. ℥viii.
Calci lactat. gr. clx.
Aq. chloroform. Oi.

S. Two tablespoonfuls in water before meals.†

From that time, perhaps seven years ago, until to-day I have tried this remedy in many and various skin diseases in a more or less desultory way, but about a year and half ago, believing that calcium had shown decided curative powers in certain instances, I decided to make a thorough therapeutic trial of the drug.

* Read before the 38th Annual Meeting of the American Dermatological Association, Chicago, Ill., May 14-16, 1914.

† In this paper this medicine will be referred to as No. 71 and the "Lotion 2" represents the well known mixture of zinc oxide, carbolic acid and lime water.

Belief in at least the theory of this method has been strengthened by several articles which have appeared from time to time in the medical press, from among which the following quotations have been extracted:

"This element (calcium), owing to recent investigations in physiology and pathology, has become of interest therapeutically. Its relationship to the functions of the body, especially to those of the nervous system, has only of late years been investigated and understood. An adult has various functional, and at times, pathologic disturbances from deprivation of calcium. Certain conditions are immediately improved and may be soon cured by its proper administration. We are more and more coming to understand that condition of the body which may be termed hyperacidity, or at least lessened alkalinity, especially of the blood. The deleterious effects of an excessive amount of magnesium and a deficient amount of calcium in plant life has long been known. L. B. Mendel has shown that the administration of calcium will increase the elimination of magnesium in the urine, and similarly, magnesium, when absorbed, leads to a larger excretion of calcium. Though it has been shown that lime is not necessary to the formation of fibrin, the fibrin ferment will not be formed and coagulation of the blood will not occur except when calcium salts are present. Von den Velden has recently shown that the administration of calcium lactate (from 1 to 1½ drams a day) for 5 days or more, will stop such bleeding as occurs in scorbutus. Certainly calcium seems to be of benefit in quieting the nervous system of certain patients." (*Jour. A. M. A.*, lxii, pp. 206 et seq.)

"Calcium enhances the coagulating power of the blood and also renders the morbidly permeable vessel walls less permeable. Usually deficient in skin eruptions due to anaphylaxis" (Von den Velden, *Therapeutische Monatshefte*, Oct., 1913).

"The relationship of diminished calcium content of the blood to some angioneurotic oedemas and to some of the urticaria-like localized swellings and oedemas, has lately been shown by investigators. It seems to be a clinical fact in many cases, that these exudates and symptoms of anaphylaxis are prevented, or are quickly improved, by the administration of calcium." (Reference lost).

As stated above, calcium has been prescribed by me in many different conditions, but by elimination of the unsatisfactory tests the final trials have been limited to the following diseases and conditions: pernio, hyperidrosis, herpes simplex, erythema multiforme, urticaria, livedo, purpura and angioneurotic oedema.

Many more tests have been made than would appear from the detailed prescriptions subjoined, but many patients have appeared but once and most of these have failed to answer subsequent inquiries as to the results of treatment; some histories have been mislaid; and the hospital class has proved most unsatisfactory and their records have been largely rejected.

In addition to the administration of calcium salts, patients have been asked to partake as freely as possible of food rich in calcium and have been urged to avoid raw fruits and all acid foods, for it has seemed to me that many people suffering from the suspected dis-

eases have been large consumers of these articles of diet and because breakers of this law have apparently paid the penalty by subsequent increase or return of their pathological symptoms.

The foods rich in calcium have been chosen with some discrimination from the following table, for it did not seem wise to include in the dietary of this class of patients such questionable (anaphylactic) articles as egg albumen, orange, cabbage and Swiss cheese.

GRAMS OF CALCIUM OXIDE IN EACH KILOGRAM.

Meat	0.06	Cocoa	1.15
Potato	0.20	Peas	1.20
Egg albumen	0.20	Beans	1.45
White bread	0.30	Cow's milk	1.51
Orange	0.60	Yolk of eggs	1.90
Cabbage	0.60	Spinach	1.96
Rice	0.78	Butter	3.50
Dates	0.80	Swiss cheese	13.50

External treatment has been prescribed in all cases, a factor which vitiates the scientific value of the whole work, but it must be borne in mind that most of these patients were referred to the writer by general practitioners who had been unsuccessful in the previous treatment of these individuals, and furthermore that these men and women were mostly wage-earners who deserved as speedy restoration to health as was possible. It must be remembered also that the work was necessarily hampered by the fact that all these patients were ambulant who obey or break laws as the spirit moves them, and who are prone to stop treatment, despite all previous admonitions, the moment the discomfort or the disfigurement of a disease abates. It is, therefore, not an exaggeration or a misstatement that the writer makes when he says, after a careful study of the subjoined records, that he believes that but few of these patients have taken the calcium lactate sufficiently long or at suitable times to test fully its power to cure or to prevent the recurrence of their diseased conditions.

CASE REPORTS.

URTICARIA.

CASE I. Miss M. A. D., æt. 34. Patient has been under severe nervous strain and four weeks previously, while in Florida, the eruption appeared after a meal of lobster and has persisted. The original lesions appeared under the buckles of the garters but since then have spread to groins and on arms to axillæ. They re-

semble partly the pomphi produced by brown-tail moth caterpillar hairs and partly the papular lesions of erythema multiforme. R No. 71 and Lotion 2.

Four days later the patient was well and there was no recurrence of the outbreak until two weeks later, when boiled cod produced a slight recrudescence.

CASE 2. E. W. R., *æt* 25. In July, patient ate a fish dinner which was followed a week later by the appearance of wheals which have persisted for three months. At times the body itches everywhere and the face is often bloated on waking. Examination shows a delicate looking man with flushed eyes, hands and arms covered with papules resembling those of erythema multiforme and chest flecked with wheals and erythema. R No. 71 and external applications.

Three months later the patient reported that all signs and symptoms had disappeared in two weeks, but that another outbreak had just appeared.

CASE 3. Miss S. G. B., *æt* 15. Itching started on body eight years ago, after an injection of antitoxin and has continued to this day. Examination revealed no wheals but the skin, especially of head, arms and buttocks, was torn and urticaria factitia was present. The child never plays but locks herself into her room and remains there when out of school. R No. 71 and washes.

Three weeks later, all signs of the previous excoriations, save pigmentation, had disappeared and no fresh scratch marks were visible.

CASE 4. Mrs. A. E. S., *æt* 39. Patient is a frequent victim of hives in the summer months. Present attack began in the middle of November and has lasted three weeks. Itching is intense, patient is highly nervous, and sleep is next to impossible. There are large elevated wheals over the body. R No. 71 and external applications.

One week later patient reported that she slept the whole of the first three nights and then treatment was interrupted by menstruation and insomnia developed again. Itching and wheals much reduced. After another week's interval patient reported herself wholly well, no itching, no new wheals and friends comment on her much diminished nervous condition.

This patient afterwards remarked that she thought she had been inclined to kill herself to escape the frightful itching and lack of sleep.

CASE 5. Mrs. H. L. R., *æt* 29. "Never free from itching which is at times intolerable" and extends even into scalp. Has tried many advertised remedies without success. Menstruation is very irregular, intervals of ten weeks at times. Can't sleep at night and is always tired. Has to remove clothes now and then because skin swells so. Examination shows a universally tough and leathery skin as in prurigo, with scattered wheals. R No. 71 and external applications.

One week later hives were developing still but in comparatively small numbers. Skin as a whole was strikingly softer and smoother and far less harsh to the touch and there was an enormous reduction in the number of small excoriations and crusts, while the patient volunteered the remark that she felt far more comfortable.

CASE 6. B. W. M., *æt* 6. Two days ago present attack developed, the first for a year, but as a young child urticaria occurred frequently, each attack lasting from one to several weeks. To-day an outbreak of persistent, elongated, oval, elevated, pink-red wheals on trunk, front and back. R No. 71. Lotion 2. Two weeks afterward all lesions had gone, but an occasional hive develops from time to time.

CASE 7. T. P. H., *æt* 51. June 30, 1913. Duration two years on and off. Marked eruption of large wheals, much itching. R No. 71. Lotion 2.

Feb. 9, 1914. Man returned for treatment of eczema and says that treatment of last year cured him quickly.

CASE 8. F. A., *æt* 32. Feb. 4, 1914. Duration one year. Complaints of itching on body, arms and legs. Shows scattered, small, pea-sized wheals on trunk and arms with fine excoriations. R No. 71. Lotion 2.

Feb. 19. Better. Fewer lesions and less itching.

CASE 9. F. D. E., æt. 25. During the previous summer patient was poisoned by strawberries and for the ensuing four months suffered from recurrent attacks of hives. Eleven days before his visit he had eaten strawberries for the first time this year and two to three days later urticaria reappeared and has persisted. Friction or pressure cause wheals; bowels have been constipated and patient has eaten much fruit. R No. 71. Lotion 2.

April 27. Telephone that eruption disappeared in a short time and has not recurred.

CASE 10. F. A. K., æt. 16. Feb. 9, 1914. Shows to-day on chest a horizontal band of erythema with numerous elevated, pea-sized, white papules accompanied by uncontrollable itching. R No. 71. Lotion 9.

Feb. 16. Volunteers that he is much better.

CASE 11. J. J. L., æt. 18. Feb. 20, 1914. First attack. Four days' duration. History not obtainable. No previous treatment. Looks pale and nearly fainted in hospital while waiting. On forearm and in lumbar region are large areas of scarlet, elevated wheals. R No. 71. Lotion 5.

Feb. 26. No new areas have developed.

CASE 12. Miss M. M. B., æt. 30. March 23, 1914. First attack six months previously. Present eruption twenty-four hours old. Itching is marked and when scratched the skin rises up into wheals. To-day lesions vary up to size of palm. Urticaria factitia is prominent. R No. 71. Lotion 2.

March 30. No new wheals since last visit.

CASE 13. Mrs. R. B., æt. 30. Eight months before her visit the patient was attacked by acute œdema and pain in the feet, followed by an oppressed feeling in the pit of the stomach and in the bowels. One month later an eruption of hives developed and has persisted, with the exception of two intermissions of a fortnight each, ever since. The lesions, at times universal and at times localized, consist of wheals, white centrally and red peripherally, and varying in size from a pea to a silver dollar, accompanied by intense itching and by painful and swollen feet. R No. 71 and external applications.

One week later the patient reported that there had been no fresh wheals but that she still felt tired and that the œdema of mouth, feet and ankles was still present, though to a lesser degree.

CASE 14. G. H. L., æt. 60. June 25, 1912. Has had hives for four years which last off and on year in and year out. Used to be universal and "terrible." Has rheumatism and asthma and hay fever and one or more of these symptoms alternate with skin eruption. Strawberries and coffee not tolerated. At first visit there was an excoriated papular condition limited to forearms with urticaria factitia universally. R No. 71 and external applications.

Ten days later, patient returned and said that medicine caused diarrhœa and was therefore stopped. Relates that in Europe itching ceases but returns after a few days in America.

April 21, 1914. Sent to me by family physician who reports a negative physical examination, including absence of abdominal ptosis. Patient has been to many physicians in the interim without any cure and states that calcium lactate "is the best thing ever tried but is merely palliative." Rich fish has produced a severe exacerbation of the itching and of the eruption which prevent sleep until nearly four in the morning. Referred to Dr. F. S. Burns for X-ray exposures. After four exposures, patient was enabled to sleep throughout the night and after two more sésances the patient reported that he was free of all symptoms.

RÉSUMÉ.

On the whole, these cases of urticaria have done well. Statistically, twelve showed great improvement, two some improvement, and

nine others, not reported, none whatever. Of course, the average eruption of hives is a matter of only a few days' duration at most, but these individuals were not for the most part examples of that simpler type of the disease, but represented rather the grave, intractable variety which has in at least one of my patients in the past led to self-destruction.

Cold figures are not always our only means of judgment in medicine, but from personal contact with these patients it has seemed that the ingestion of calcium has been followed by improvement in the majority, and was very merciful in at least two instances.

ERYTHEMA MULTIFORME.

CASE 15. Miss G. R. M., æt. 6. At age of $3\frac{1}{2}$ the skin eruptions first appeared. At first a few lesions in the spring which would last a few weeks but in the autumn would persist "much longer." Present attack began six months ago and has persisted. "One place gets well and others break out." For two months has received vaccines. New vesicles show streptococci; old pustules, streptococci and staphylococci; blood, streptococci.

When first seen, on July 2nd, the face and back of hands to elbows exhibit an almost confluent mass of typical erythema multiforme, vesicles, bullæ, pustules and crusts. Lower legs show fresh vesico-papules. R No. 71. Lotion 2.

July 8. Father telephones that lesions are drying up and that no new lesions have developed (although previously new lesions had appeared every day).

July 16. Father telephones that for the first time there have been a few new spots.

August 5. Entirely well up to five days ago. Now a very severe bullous attack of face, back of hands, forearms and legs. R. Eat food with marked calcium content.

August 19. Two days ago a few pea-sized scattered vesicles. Had stopped ingestion of calcium. No subsequent lesions.

This was a remarkable change after these three years of almost perpetual and severe outbreaks.

CASE 16. P. H., æt. 45. March 21, 1914. Came to America ten years ago and ever since there has been an outbreak on the skin in the same areas every March. Is perfectly well otherwise. Is not a lover of acid foods and seldom eats oranges. Has been cared for by one of our best dermatologists for years. To-day on forehead, cheeks, back of neck and of hands are round, pea to 5 cent-sized, elevated, flat topped, pink papules of an unusual appearance. R No. 71. Lotion 2.

April 23. Telephones to inquiry that "attack was gone in one week, whereas in former outbreaks the lesions had always lasted from one to two months."

CASE 17. Miss A. L., æt. 8. On July 13, the child ate many blueberries which had been sprayed with arsenate of lead. Following day felt "seedy" and had a temperature of 101° in the evening. On July 15 there was a strange brick-red band-like elevation near left shoulder. Child depressed and thought she was going to die. For the following two days, temperature reached 101° in the afternoon. R No. 71. On July 19, chest area began to clear up in the centre but typical lesions of erythema multiforme (papules with central bluish depressions), have appeared on back of hands, forearms and knees. The change in the child's mental and physical symptoms subsequent to the ingestion of the calcium lactate was very striking to all those about her.

CASE 18. A. J. M., æt. 27. July. Has had the disease for seven years with

attacks at three month intervals and constantly recurrent headache. Patient feels sluggish, cross and impatient during these attacks. R No. 71.

August 7. Only one headache since last visit and previous disagreeable subjective symptoms have not recurred and man is enthusiastic.

March 5. Writes of another attack, the first since July, under the care of Dr. H. H. Hazen of Washington.

CASE 19. J. R., æt. 45. Disease began in 1906 and every two or three months would break out in the form of insomnia, followed in two days by erythema of hands, forearms, penis, scrotum, nose and lips. With the subsidence of this intense redness, blisters would develop. This periodicity continued until 1908, when only two attacks were experienced and ever since there have been recurrent outbreaks at relatively rare intervals.

Beginning January 1st of this year, there have been several attacks up to Feb. 14, when patient consulted me by letter. R No. 71. Lotion 2.

Feb. 26. Patient writes that there was a recurrence of the erythema on Feb. 19, which subsided in twenty-four hours and that since taking the medicine he had enjoyed a sounder sleep than had been his lot for years.

March 12. Recently there have been a few recurrences but the lesions are smaller than in the past and subside much more quickly.

April 29. The patient writes, "It is a great happiness to me to be able to write that the treatment seems to be producing a very decided improvement in my condition, and I am very hopeful that I shall soon get rid of my trouble altogether."

The patient writes, July 30: "This is to report that since my last letter, I have had no attack of my old trouble and have enjoyed excellent health."

CASE 20. Mrs. G. A. V., æt. 51. The patient has experienced several attacks of anaphylaxis (?) following the ingestion of scallops, oranges and apples. The manifestations consist of rapid swellings of tongue, pains in bowels, vesicopapular eruptions of palms and edema of face. These attacks have occurred throughout her life up to the appearance of outbreaks of erythema multiforme, but none since. For the last six years the erythema multiforme has appeared at yearly intervals up to the present year and each attack has lasted for a week. Present eruption consists of large brick-red papules on cheek, lips, neck, and on back of hands and wrists. R No. 71. Lotion 2.

Jan. 14, 1914. Patient writes that "the eruption disappeared quickly."

June 8, writes: "I took the calcium in April and May to ward off the usual Spring attacks, and I am glad to report that I have had no further outbreaks."

CASE 21. Mrs. B. B., æt. 27. Jan. 2, 1914. Has had previous attacks. Present eruption appeared on Dec. 24th on palm of right hand. Each day more lesions have come. Patient feels rather upset by the disease. To-day the outbreak is present on the sides of the tongue, on left elbow, palms and dorsa of hands, and on knees. Lesions, except on knees, are round, flat-topped, concentric bullæ, of a dull gray color. R No. 71. Lotion 2.

Jan. 5. Mouth has become more involved and two more bullæ have appeared on wrists; older lesions are flatter.

Jan. 9. Only three active lesions, vesicles, on fingers. Mouth has cleared up, leaving on lower lip six or eight exulcerations. Patient feels better.

March 3. Last dose of calcium lactate six weeks ago. Ten days ago began eating oranges again and three days later noticed "canker" in mouth. Two days later papules appeared on fingers, wrists and feet. To-day, perhaps twelve button-sized papules with central purpuric depressions and elevated pink-red periphery. R No. 71. Lotion 2. Stop acids.

March 7. No new lesions since last visit and "none of the old ones seem to amount to anything." The lesions appear smaller and drier and flatter and less red. Patient feels well.

CASE 22. R. B., æt. 35. Feb. 20, 1914. Previous morning, noticed an erup-

tion on back of hands and to-day the outbreak suggests dermatitis venenata at first glance. On back of hands and half way up extensor surface of forearms and on flexor surface of wrists are many pinhead to small pea-sized papules, many of which look as if they contained fluid. A few are becoming umbilicated. In addition there are a few similar lesions over malar bones and on dorsum of feet. R No. 71. Lotion 2.

Feb. 26. Great improvement.

CASE 23. J. P. J., æt. 40. March 4, 1914. Similar attack one year previously. Five days ago, present outbreak appeared and to-day on back of both hands and over wrists are many pea to dime-sized, annular lesions, some of which are umbilicated. Severe itching. R No. 71.

March 5. Condition the same. Referred to medical department of the hospital.

April 25. Writes that he was well two weeks after last visit.

CASE 24. J. J. M., æt. 15. Feb. 24, 1913. During last three Februaries has had a similar eruption. To-day the outbreak is one week old and consists of typical brick-red papules, some tending toward target formation, while lesions on lips and adjacent right cheek are vesico-pustules. R No. 71. Lotion 2.

Jan. 26. No attack, but wants to ward off the usual February outbreak.

April 25. Writes that an outbreak occurred but was mild in nature.

CASE 25. Miss A. M., æt. 30. March 5, 1914. On back of both hands and on extensor surfaces of both forearms to elbow is a dull red, maculo-papular eruption. Some lesions are annular. R No. 71. Lotion 2.

March 19. Lesions have flattened down and are very pale.

CASE 26. B. R., æt. 9. Nov. 5, 1913. When first seen there were many papules and vesico-papules on face, hands and ears. R No. 71.

Nov. 10. Lesions healing rapidly.

April 20, 1914. The mother reports that there has been no recurrence of the disease.

CASE 27. S. C. A., æt. 18. Feb. 8, 1914. At back of and on sides of neck, on nose and chin, over shoulder blades, on elbows and patellæ, in popliteal space and somewhat on back of hands are scattered, isolated or grouped, slightly elevated, brick-red macules, some of which are excoriated. Hard palate and buccal surface generally show similar papules, the latter lesions tending toward hæmorrhage. Hands are purple red, a color never noted by patient before. R No. 71. Lotion 2.

April 29. The patient writes that he was "practically all well in one week"; but he took only one bottle of calcium and never repeated the medicine although he has had several mild recurrent outbreaks on elbows, knees, and on back of thighs.

CASE 27A. Mrs. A. S. F., æt. 37. June 2, 1913. Patient can't eat strawberries or salt meats. First attack 10 to 12 years ago and recurrences every 2 to 3 months since then. Eruptions used to be severe, involving the entire arms; now limited to classical regions. First symptom is "canker" in the mouth, followed by the cutaneous outbreak. To-day there are typical flat-topped or umbilicated vesico-papules on back of hands, elbows and ears. Much burning and itching. R No. 71. Lotion 2.

May 14, 1914. To a letter of inquiry patient writes: "As soon as I commenced taking your medicine there was an improvement right away. I haven't had a bad attack since. Sometimes there are a half dozen spots on my hand, sometimes on my elbow, but the outbreaks don't amount to anything. I find I can't eat the things you said would poison me; if I do, I feel very uncomfortable afterward and in a day or two I see a few spots coming out. But if I take your medicine (which I always keep on hand) right away I feel better and the spots disappear. For about twelve years I have had some terrible attacks and was treated by three different doctors, extra good ones, without any success, but, etc., etc."

RÉSUMÉ.

Statistically, seven of this group showed decided improvement and six exhibited what one might call the normal, although perhaps quickened, evolution of the disease, following the ingestion of the calcium. But surely one could not have observed and followed Cases 15, 16, 17, 27A, and to a lesser extent 18 and 19, without being impressed with the idea that some new and powerful factor had made a deep impression upon the economy of these sorely afflicted individuals.

PERNIO.

CASE 28. Mrs. H. R. B., æt. 27. Has always had a "wretched" circulation. Chilblains every winter for years. Physical examination negative, otherwise. Within two weeks patient has noticed large pea-sized, red, rather ill-defined nodules over finger joints. Hands and feet cold and clammy. R No. 71 and local applications.

Twelve days later, the patient returned and enthusiastically exclaimed that she was "all well." Examination showed that the nodules were quite gone and that the hands were not cold and wet.

CASE 29. Miss A. B. D., æt. 32. The patient has had chilblains in previous winters and the present year for four months. Examination shows on the back of each hand a large area of pink erythema, dotted with vesico-pustules. The hands burn and are uncomfortable. R No. 71. Lotion 2.

The redness and swelling disappeared in three days.

CASE 30. Miss M., æt. 30. Patient states that chilblains were present throughout the previous winter. At her first visit in December, pernio had been present for ten days. The fingers were very hot and red, accompanied by a few, turgid, pea-sized papules on the fingers. R No. 71 and external applications.

Two months later patient returned because of an attack of psoriasis but said that chilblains had disappeared in two weeks and had not returned.

CASE 31. Miss H. H. B., æt. 14. The disease began the previous year and persisted through the winter. At first visit, examination revealed a swollen, puffy skin about the heel with interlying pink elevations. R No. 71 and external applications. This was at the beginning of the winter of 1912.

The disease disappeared quickly and has not recurred, although two winters have since come and gone.

CASE 32. Miss M. D. B., æt. 17. Sister of previous patient. Has a chilblain condition every winter which lasts until the spring. Present status consists of a solitary chilblain on each heel, accompanied by passive congestion of hands and legs, together with patent follicular openings. "Lives on raw fruits." R No. 71. Lotion 2.

Seven weeks later, the hands appeared less cold but there was no evident change in the condition of the legs.

CASE 33. Mrs. E. J. D., æt. 35. At first visit, in March, 1913, patient showed active chilblains and a curious toxic erythema papulatum of cheeks and neck. R No. 71. Lotion 2.

Nine days later all signs of chilblains had disappeared.

CASE 34. Miss R. B., æt. 13. Jan. 22, 1914. Chilblains of feet and hands, especially of the former, which are cold, passively congested and show hæmorrhagic bullæ on the dorsal surface of several toes. One month's duration. R No. 71; pulv. zinc, plus boracic acid.

Jan. 29. Right foot decidedly better. Bullæ have dried up and skin is no

longer clammy and cold. General vascular tone of foot is improved. Left foot does not show so marked an improvement. Child is still eating fruit.

CASE 33. Miss C. V. R., æt. 22. Jan. 5, 1914. Duration four to five years. Every winter has severe chilblains on feet. Hands not involved. To-day feet are swollen and tender and somewhat blue. R No. 71. Lotion 2.

Jan. 19. Itching much better.

Feb. 20. Nothing visible on feet but they keep patient awake by burning and itching.

CASE 36. Miss E. La R., æt. 23. Feb. 16, 1914. Duration one month. Both hands are dull red and on the fingers there are several pea-sized, firm nodules. Complaints of itching. Circulation sluggish. R No. 71. Ung. ichthyol.

March 2. Condition better, swellings gone. Circulation better.

March 19. Better, one new nodule on first finger and one on little finger.

CASE 37. Miss B. B., æt. 39. Nov. 5, 1914. Disease has persisted summer and winter for three years. In warm weather the lesions appear on arms, face and neck, and in the colder months on hands and feet only. I; No. 71 and colorless Tr. iodine. No success in this patient, despite several forms of treatment.

CASE 38. Miss M. C., æt. 17. Dec. 12, 1913. Patient has always had cold and blue hands. To-day hands are cyanotic and there are dry scaling patches resembling lupus erythematosus on fingers. R No. 71. Lotion 2.

There was no relief whatsoever in this case, despite the coöperation of several other departments of the hospital.

CASE 39. Miss H. T., æt. 27. Jan. 2, 1914. Ten years in this country. Present disturbances began one year ago and have persisted off and on ever since. Right ring finger swells at night and circulation in hands is very poor. Skin is purple and cold. R No. 71. Lotion 2.

Jan. 30. Finger is not better and still burns at night.

RÉSUMÉ.

Chilblains constitute a condition very uncomfortable from the patient's point of view, and often very refractory from the physician's standpoint. In this group of patients, however, six were practically cured in a short space of time, three were decidedly benefited, while three only were not helped at all. This seems a good showing, considering the frequent intractability of the disease.

HYPERIDROSIS.

CASE 40. E. T. S., æt. 30. As long as patient can remember, palms and soles have been moist and cold in winter and to a mild degree in summer. When first seen, there was decided passive congestion of hands and feet and there were many small and large sago-like vesicles and bullæ under the horny layer, some of which were hæmorrhagic. R No. 71. Lotion 2. Tannoform.

Two weeks later, Dec. 29, 1913, patient states that itching no longer keeps him awake and that he can sleep all through the night. Although the thermometer registers 20° F. outside, the hands and feet are warm and not blue and there are no vesicles on hands or feet. For the subsequent four months, despite a long, unusually cold winter, the patient's hands have remained well while the feet have shown a very mild recurrence of moisture and vesicles from time to time, but on April 29 word was sent by a friend that the patients' hands and feet were absolutely normal for the first time in many years.

CASE 41. M. M., æt. 45. Nov. 24, 1913. Eruption two days old and consists

of closely packed, deeply seated vesicles on dorsum of feet and toes. R No. 71. Lotion 2.

Dec. 1. To-day the whole dorsum of the foot is lifted up and is exfoliating and the active trouble is apparently at an end.

CASE 42. Miss M. K. B., æt. 20. Feb. 27, 1914. One of two months' duration, longer in a mild degree. Is decidedly flat-footed on left side. Much perspiration and somewhat sodden condition of skin between toes. Poor peripheral circulation and follicles of lower legs decidedly patulous. R No. 71, alcohol foot baths. Lotion 2. Tannoform. Referred to orthopædic department of the hospital.

March 2. No change in sweating.

March 6. Sweating gone.

CASE 43. J. J. S., æt. 24. Disease has been present three years, appearing in October and fading away in the summer when patient is on the sands of Florida beaches, barefooted most of the time. Has suffered one or two exacerbations every winter, which have made him, for the time being, a nervous wreck. Has tried "everything" from doctors and from druggists. The man is an athlete and is flat-footed. He has been a patient of two of our best dermatologists in different cities.

When first seen in his rooms, April 21, 1914, he was lying in a cool room with his bare feet covered universally with almost contiguous sweat drops or infected vesicles. R No. 71. Lotion 2. Tannoform, alcohol foot baths.

In two days the patient, who was in a highly nervous state, sent for me because the powder "caused agony" and because the alcohol baths were intolerable in 50% strength. The outward appearance was very much changed, for instead of the previous universal sweat drops one has to search to find any and the infected vesicles were cleaning up fast.

Two days later, April 25, the patient sent for me again, complaining that the pain was no better. He had suffered so long that he had apparently reached the limit of his nervous strength. The cutaneous condition, however, was in striking contrast to the apparent mental state. X-rays were advised, largely for the mental effect on the patient.

May 4. The young man came to me for the first time wearing boots and in a normal, placid state of mind. The feet were free of horny layer and looked pink and delicate but otherwise were apparently free from disease.

Here is a man cured of a hitherto most intractable hyperidrosis within two weeks. To be sure he has had four X-ray exposures but the physical symptoms had largely disappeared before this additional treatment was instituted.

CASE 44. Miss M. L. S., æt. 19. The hands and feet have been moist as long as the patient can remember. The hands are always cold, the feet less so. The patient eats a great many oranges, apples and pickles. At her first visit these conditions, plus a moist eczema of hands, were present in a marked degree. R No. 71. Tannoform and a paste of zinc and crude coal tar.

Eight days later, the patient remarked upon her better general feeling. The moist, eczematous condition was greatly improved, the hyperidrosis was less and the passive congestion less marked.

RÉSUMÉ.

Here we find four patients to all intents and purposes cured and one decidedly benefited. It seems to me fair to regard these results as very satisfactory, considering the frequent obstinacy of the condition, and in this particular group several of the patients had suffered for a number of years and suffered severely.

PURPURA RHEUMATICA.

CASE 45. Miss A. M. O'B., æt. 19. Dec. 9, 1913. Tonsillitis five months previously and following this attack, purpura rheumatica appeared and has persisted with ups and downs, ever since. Has used aspirin up to 20 grains a day. Once the ankle was so swollen that patient was obliged to go to bed and purpura subsided. Acids increase the intensity of the eruption. To-day there are square, pink or full red macules on legs and thighs and on both elbows and each lesion seems to be painful. R No. 71. Lotion 2.

Dec. 13. Five grains of calcium lactate caused nausea and vomiting and patient reduced the amount and added saleratus. Feels much better and sleeps much more soundly. Has had only an occasional twinge of pain. Foot has swollen only once. Patient is very enthusiastic. The eruption is much diminished in color and extent.

Dec. 20. One mild attack since last visit. The eruption, which increased during the pain, has nearly disappeared.

Jan. 2, 1914. Patient reports that she feels entirely well.

CASE 46. Mrs. A. F. P., æt. 66. Patient was seen in consultation with Dr. H. K. Foster of Peabody, Mass. She had had an acute attack of rheumatism thirty-three years ago and one of purpura rheumatica two years previously, which had left a "rheumatic tendency" in hands and feet ever since. On February 22nd, 1912, the husband had had grippe with subsequent aural discharge and on April 19th, the patient experienced a similar illness, followed, on May 6th, by purpuric symptoms for which she had received aspirin, salicylate of soda and lead and opium wash. May 12 itching and burning became so "intolerable" that Dr. Foster sought help. My examination revealed hands covered with elevated, blue-red papules; forearms surrounded with lighter tinted, smaller, maculo-papules almost resembling those of scabies, except for their indelibility; feet and legs a mass of almost confluent, circular pea and larger-sized macules with elevated central puncta. R No. 71. Lotion 2 and afterwards, try urotropin, autogenous vaccines, etc.

Two weeks later the patient died and to my inquiry Dr. Foster made the following reply: "After you saw Mrs. P. she seemed to improve quite rapidly and the skin eruption nearly faded out. May 21st, sudden vomiting developed, accompanied by bile and mucus and followed by extreme pain, first localized at gall bladder and across transverse colon and then giving place to tenderness of the upper abdomen. No fever but a rapid pulse of poor quality. May 23rd, more serious pain in lower abdomen and pelvis and renewed vomiting of bile, mucus and later of a dark material. Pulse very poor, 120 beats to the minute. Drawn look, no fever, mentality clear. Operation refused. May 24th the patient grew rapidly weaker and died. No autopsy.

CASE 47. Miss L. T. T., æt. 28. The eruption began two weeks previously, as a fine rash about the waist and has grown larger in character and extended downward to the knees. At her first visit, the patient complained of no subjective symptoms save itching, but exhibited an almost coalescent eruption of full red, slightly elevated papules, connected by erythema. R No. 71. Lotion 2.

One week later, the skin was still congested but the papules had settled down to the skin level while the palms were full of deep seated, shotty vesicles. The local physician wrote a letter in which he expressed his surprise at the patient's improvement.

LIVEDO.

CASE 48. J. G., æt. 36. Jan. 29, 1914. Both feet show a peculiar vascular mottling, which fades easily on pressure but returns always in situ. R No. 71.

Feb. 17. Skin of feet entirely normal.

SICK HEADACHE.

CASE 49. D. E. W., æt. 50. The condition lasts for months at a time but has yielded rapidly and effectually at two different intervals, to the ingestion of calcium lactate.

ERYTHEMA TOXICUM.

CASE 50. Mrs. A. W. P., æt. 46. Six months previously was seized with severe hyperæmia of kidneys and since then has eaten no meat but recently has lived principally on melons, cucumbers, tomatoes and pea soup. Three weeks before her first visit, she had had an eruption on her skin and one week ago a similar outbreak which has quite exhausted her. To-day, the "lupus erythematosus area" of the face is markedly red and very pruritic. R No. 71 and external application.

Nine days later there was no sign of the disease, subjectively or objectively.

RÉSUMÉ.

Of these last four conditions, the numbers recorded are too small to be of any scientific value, and yet the degree of success attending their treatment is striking and worthy of remembrance in the future.

In regard to purpura, my general impression of the value of the drug is rather contrary to the results obtained in the few cases recorded. The drug has been tried in numerous other instances, and although my notes are misplaced it would seem as though calcium failed more often than it helped.

SUMMARY.

This, then, is the detailed record of the use of calcium lactate in certain allied(?) conditions of the skin. The success attending its use does not prove to be striking, assuredly, and yet the drug has proved of splendid efficiency in some of these cases—an efficiency far more patent to the observer than to the reader of these notes, perhaps. Most of these patients were severely affected and had passed through other hands before reaching me, so that this severity must be taken into account in judging the final results.

To sum up this investigation, it seems fair to state that calcium is certainly not a specific for any of the diseases in any sense of the word, but that it is a drug which may render distinct and most welcome service in any one of them, and a drug which should always be tried in obstinate examples of urticaria, erythema multiforme, pemphigus, hyperidrosis and possibly purpura.

DISCUSSION.

Dr. PUSEY said that ever since we had been brought under the influence of Wright's fascinating theories, he had been interested in the coagulation time of the blood in dermatoses and the use of calcium salts in certain of them. It was his routine practice for many years to take the coagulation time in urticaria, erythema multiforme, chronic eczemas and similar conditions and to give calcium salts. He had not been able to convince himself of their value and he had given them up almost entirely; nevertheless, in view of Dr. White's recommendation, he would give them another trial.

Dr. HARTZELL said it was quite refreshing to find that there was at least one member of the Association who still believed that one of the aims of our profession was the cure of disease, and who was not content to do only spinal puncture and inject serum into his patients.

As to the calcium salts, Dr. Hartzell said he had employed them very extensively, and he could not recall a single instance where he thought that they had benefited his patients. He had administered them liberally in urticaria without apparent effect. Still, like Dr. Pusey, he would take renewed courage and try them again.

Dr. MONTGOMERY said he gave calcium lactate in a very interesting case of erythema multiforme which followed the injection of the *Bacillus coli communis*. The use of the calcium salt was followed by no appreciable amelioration of the symptoms. In a case of Raynaud's disease it could not be certainly determined that the calcium salt caused the amelioration that occurred after its administration, because in each attack in which it was given an amelioration might have occurred in the natural course of the attack. He had never tried calcium lactate in hyperidrosis.

Dr. KING-SMITH said that, together with his associate, Dr. George Ross, they had been disappointed with the use of the calcium lactate. After what appeared to be a fair test in a great many cases, their results were rather disappointing. Their best results, probably, were obtained when the drug was given in twenty-grain doses, three times daily, for two consecutive days, then stopped for two days and then repeated. Small doses, given over long periods of time, did not seem to act as well as massive doses given for a day or two and then stopped.

Dr. WHITE, in closing, said that he also had many failures with the calcium salts, but as the report of his cases would show, the results in some were highly satisfactory. The treatment did not consist solely in the administration of the calcium lactate; the patient's food must be regulated; the acids must be eliminated absolutely from the diet; food rich in calcium salts should be prescribed and the use of magnesia should be forbidden, for the two drugs, magnesium and calcium, neutralized one another, and should not be given at the same time. The treatment was by no means successful in all cases, but it was a method which should be kept in mind always in dealing with some of these intractable and distressing dermatoses.

PERSONAL OBSERVATIONS UPON SKIN DISEASES IN
THE AMERICAN NEGRO.

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NO apologies are needed for presenting a paper upon the dermatological peculiarities of the American negro based entirely upon personal observation. Howard Fox has written an excellent paper upon the same subject, but his statistics were gathered from the clinics at Johns Hopkins Hospital and from the Central Dispensary in Washington, hence from cases that he had not personally observed. The following statistics are gathered entirely from cases that have personally been observed. The 2,000 cases forming the basis of this paper were consecutive cases that came under the observation of the writer, in part from Dr. Gilchrist's clinic at the Johns Hopkins Hospital, in part from the medical clinic at the Children's Hospital at Washington, but in the most from the dermatological service at the Freedmen's Hospital in Washington. Inasmuch as over 1,600 of them are from the last institution, it seems wise to say a word or two concerning the character of the service there. Freedmen's Hospital is so closely associated with the Howard University that many of the students of the latter institution come for treatment, often for very minor ailments, such as an extremely mild acne. On the other hand, many of the students are from some of the West India islands, so we have to be continually on the lookout for rare forms of disease, peculiar to the tropics. The one case of yaws that was observed was in a student from that section of the country. Doubtless statistics gathered from other sections of the country would show marked variations from the ones herein presented. The 2,000 cases of skin disease in whites were seen partly at Johns Hopkins, and partly at the Georgetown University Hospital.

Whites. Blacks.		Whites. Blacks.	
Acne vulgaris	180 169	Carcinoma spinocellulare...	.. 8
Aerocyranosis	2 ..	Chloasma	6 12
Alopecia	4 3	Cicatrix	1 3
Alopecia areata	26 8	Clavus	2 2
Angioma	16 4	Condyloma acuminata ....	.. 13
Atheroma (wen)	6 2	Cornu	1 ..
Atrophies	4 4	Dermatitis (chapped skin). ..	.. 3
Blastomycosis	1 3	Dermatitis actinica (X-ray) ..	1 ..
Bromidrosis .....	.. 1	Dermatitis calorica	6 4
Callositas	8 2	Dermatitis factitia	2 2
Carcinoma basocellulare....	30 ..	Dermatitis herpetiformis...	10 ..

	Whites.	Blacks.		Whites.	Blacks.
Dermatitis medicamentosa..	10	12	Pellagra	4	12
Dermatitis papillaris capil-			Pemphigus	1	2
liti .....	..	9	Pernio	1	5
Dermatitis traumatica .....	..	3	Pityriasis rosea	26	12
Dermatitis venenata	18	17	Pityriasis faciei	6	34
Dermatitis (rhus).....	18	14	Pityriasis corporis .....	..	7
Ecthyma	16	17	Pompholyx	6	3
Eczema erythematosum....	58	17	Prurigo	1	..
Eczema folliculare	6	9	Pruritus	24	16
Eczema impetiginosum....	22	12	Psoriasis	82	8
Eczema papulosum	70	71	Purpura	6	6
Eczema madidans	64	20	Rosacea	22	2
Eczema rubrum	14	5	Raynaud's disease	1	2
Eczema squamosum	78	75	Rotheln	2	5
Eczema verrucosus .....	..	4	Sarcoma	1	..
Eczema vesiculosum	78	24	Sarcoma (Kaposi)	1	..
Elephantiasis	1	3	Scabies	136	211
Erysipelas	8	10	Seborrhœa (capitis)	20	21
Erythema induratum .....	..	1	Stomatitis	10	9
Erythema multiforme	34	10	Sycosis vulgaris	36	20
Erythema nodosum	4	..	Chancre	2	12
Erythema scarlatinoides....	2	2	Chancre (extragenital)	12	1
Erythrasma	1	..	Syphilis maculosum	18	10
Exfoliatio areata linguæ ..	3	3	Syphilis maculo-papulosum ..	8	4
Fibroma	3	3	Syphilis follicularis.....	..	10
Folliculitis	6	2	Syphilis papulosum	10	97
Frambœsia .....	..	1	Syphilis annularis .....	..	43
Furunculosis	38	18	Syphilis pustulosum	4	12
Herpes simplex	14	8	Syphilis (secondary)	22	68
Herpes zoster	10	22	Syphilis gummosa	14	80
Hypertrichosis	1	1	Syphilis nodularis	20	19
Ichthyosis	6	3	Syphilis (palmaris)	12	3
Impetigo contagiosa	78	53	Syphilis (tertiary)	12	39
Infections	4	8	Syphilis (hereditary)	10	42
Intertrigo	9	4	Thrush	1	2
Keloid	1	14	Tinea favosa	10	..
Keratosis	6	4	Tinea circinata	16	21
Keratosis pilaris	4	1	Tinea cruris	8	1
Leukoplakia	5	2	Tinea sycosis	4	..
Lichen planus	12	3	Tinea tonsurans	32	81
Lichen ruber	1	..	Tinea versicolor	24	19
Lipoma	1	2	Tinea unguium	1	..
Lupus erythematosus	10	3	Tuberculosis cutis	4	5
Lupus vulgaris	8	8	Ulcus	22	6
Miliaria	6	13	Uridrosis .....	..	1
Molluscum contagiosum ...	2	1	Urticaria	82	125
Morbilli	3	6	Urticaria gigans .....	..	8
Nævus pigmentosus	16	3	Vaccinia	1	..
Nerve injury .....	..	1	Varicella	16	38
Neurosis .....	..	1	Variola .....	..	7
Oedema, wooden	1	..	Verruca	26	26
Onychia	2	2	Verruca senilis	4	1
Papilloma	3	7	Vitiligo	4	26
Paronychia	2	2	Xanthelasma	8	..
Pediculosis capitis	66	3	Insect bites	5	4
Pediculosis corporis	14	11	Undiagnosed	3	13
Pediculosis pubis	4	1			

Out of a total of 2,000 cases, 718 were practically full-blooded negroes, and 543 had had much more negro than white blood; the remaining patients were mulattoes, that is, the white blood either

predominated or was about equal in amount to the negro blood. As is well known, it is often very difficult to estimate the admixture, for two very black parents will often have a very light child; in other words, Mendel's law applies. In making the decision, the color of the skin was taken as the chief factor, for the general caste of features, the kinkiness of the hair, and the contour of the lips and nose are apt to be very deceiving, inasmuch as certain of the negro tribes have almost European features. The enumerators of the twelfth census held that about 26 per cent. of the negro population of the District of Columbia was composed of mulattoes, and from personal observation the author is inclined to believe that these figures are substantially correct. If this be true it will readily be seen that the mulatto comes under observation for skin troubles more frequently than his darker-skinned brother, inasmuch as over 36 per cent. of the cases were in this class.

ACNE VULGARIS.—According to these statistics, acne is almost as common among negroes as among whites, this disease constituting 8.4% of all cases seen, or a total of 169. However, among the pure-blooded blacks there were but 38 cases, or a total of 5.3%. Fox states that the disease is much less severe in the pure blacks, but the author feels that there is but little difference, for he has seen many very severe cases in the very dark. Nor does the trouble respond to treatment any more rapidly than in the whites.

ALOPECIA AREATA is very much rarer in the colored race, and when it does occur is almost never severe, there usually being only one or two small patches. There were but 8 cases in this series, and 4 of these were confined to the beard.

BASOCELLED CARCINOMATA, or the milder type of skin cancers, are almost unknown among the negroes. In the five years that the author has been connected with the Freedmen's Hospital, there has not been a single case on any of the services. The more malignant type, the squamous or prickle-celled variety, is likewise rare. Although 8 cases appear in these statistics, all were referred from the surgical service and constitute all of the cases of cancer seen at the Freedmen's Hospital in five years. It is interesting to note that precancerous lesions, especially the seborrhœic warts or patches are very rare in the colored; the pigment must act as a preventative against them, as Hyde believed.

CHLOASMA is more common in mulattoes than in either whites or full-blooded negroes. It is an extremely difficult disease to treat, any attempt at removal usually resulting in an increased deposit of pigment, and for this reason is best left alone.

DERMATITIS ACTINICA, or X-ray dermatitis, seems distinctly harder to produce in the blacks. In one case of psoriasis, in which treatment was pushed, some pigmentation developed, but no erythema. The X-ray operators in Washington are in accord in stating that the negro is much harder to burn than the white.

DERMATITIS PAPILLARIS CAPILLITH occurs not infrequently among the very dark negroes, but seems to be as rare in mulattoes as in whites; all of the 9 cases were in pure negroes.

DERMATITIS VENANATA, due to ivy, seems almost as common in the two races; in this series of cases there were 18 instances of the troubles among the whites and 14 instances in the colored, nearly all of them very dark. The disease probably does not occur among mulattoes because they are city dwellers and do not go into the country where they are apt to come in contact with the plant. Each year the author carefully questions his students on the subject, and invariably finds that most of the class have suffered from ivy poisoning at some time. The disease is just as severe in one race as in the other.

ECZEMA is less frequent among the colored, this series showing but 231 cases for this race as opposed to 390 cases in the white. It can readily be noted that erythematous, vesicular and weeping eczemas are not frequently met in the blacks, while the papular and squamous varieties are very common. Some of the cases of eczema are very severe; in this series there were 5 instances of a generalized eczema in a full-blooded black. The disease seems to respond to treatment rather more readily, however, if it is given half a chance.

ERYTHEMA MULTIFORME is distinctly less frequent as well as less severe in the colored, a point that is brought out in Fox's work as well as here.

FURUNCLES AND BOILS, as noted by Fox, are much less frequent than in the whites.

IMPETIGO CONTAGIOSA is not often encountered among the blacks in its classical or text-book form; as a general rule, there are but one or two lesions, and these are very apt to be on the scalp.

KELOIDS are much commoner in blacks, especially the dark-skinned ones, than in whites; in this series there was but one keloid in a white man, and 14 in negroes, practically all in the pure type.

LICHEN PLANUS, as shown by the statistics of both Fox and the author, is less common in blacks than in whites, although there seems to be no difference in the course of the disease.

LUPUS ERYTHEMATOSUS, likewise, seems to be more common among whites.

PIGMENTED MOLES of various kinds, also the vascular nævi, are certainly much less frequently encountered in the negro race. It is indeed a rarity to see a "port wine stain" on the face of a negro, or even upon the face of a light mulatto. The author is unable to assign any reason for this difference.

PEDICULOSIS CAPITIS is very rare among negroes. The author's statistics show but 3 cases as against 66 in whites. In going through the hospital wards, which contain the lowest types of humanity, it is very rare to find these parasites in the colored, but certainly not in the whites. The explanation that the mothers take especial care of the heads of their children does not seem to explain this racial immunity, for one would expect to find it in those who people the slums at least, and this is apparently not the case. The prevalence of *tinea tonsurans* among the colored children would also seem to indicate that colored mothers are not as careful as they might be. The other varieties of pediculosis are encountered with about equal frequency in the two races.

PITYRIASIS ROSEA in the colored runs a slightly different course than in the whites. Of course it is usually impossible to see the characteristic coloring, but in addition to this, there seems to be a special tendency for the lesions to group themselves on the chest and neck and spare the limbs and abdomen. The course is about the same as in the whites, but as a rule there are more constitutional symptoms, sore throat being especially prevalent.

PSORIASIS is certainly much less common in the negro, this series showing but 8 cases, and Fox's series of 2,200 showing but 10 cases. The very acute psoriasis, resembling a seborrhœic dermatitis, must be very rare in negroes, none of the author's friends having seen a case. Contrary to the statements of most authors, Chalmers tells me that he has seen well-developed instances of this dermatosis in native Africans. Two of the cases only were in mulattoes, the rest in full-blooded negroes. The disease seems to run the same course as in whites; two of the cases proved themselves to be absolutely intractable to treatment: one of them developed many new lesions while on a strict diet, and under X-ray exposures.

ROSACEA is almost unknown in pure negroes: the two cases in this series occurred in light mulattoes.

SARCOMATA of the skin are very rare in negroes, also the lymphomata, including mycosis fungoides, are not frequently encountered, as Strobel and the author have shown.

SCABIES, according to the figures of the author, is more prevalent

among the colored, although Fox states the reverse. There is practically no difference in the course of the malady in the two races.

SEBORRHŒA presents some marked differences. In the first place, the skin of the negro is naturally very oily, and the face is always more greasy than in the average white person. On the other hand, the yellowish patches of seborrhœic eczema on the chest or back are rarely encountered, neither do we frequently find acute forms of seborrhœic dermatitis with a considerable amount of inflammation. However, the dry type is frequently encountered on both the face and body. On the face the lesions are white and scaly, form rings and are very chronic, often lasting for months, with frequently a temporary loss of pigment when the scales disappear. This condition is spoken of as pityriasis faciei or alba, and was encountered 34 times in the colored and but 6 times in the whites. A similar condition is often met on the body, the patches sometimes being small and numerous and sometimes large and few. This condition has been recently described by Toyama as a "noch nicht beschriebene Dermatoze," and published under the name of pityriasis circinata.

SYCOSIS VULGARIS is less frequent among the colored and is certainly less severe.

SYPHILIS presents too broad a field to cover in the present paper, so only a few of the dermatological peculiarities of this infection will be mentioned. In the first place, syphilis seems to be more prevalent in the negro race, which is certainly not to be wondered at considering their environment. Practically all authors are agreed on this point.

Curiously enough, extragenital chancres are very rare; in ten years' experience the author has seen but one, and there has not been a single case at the Freedmen's Hospital in five years.

Macular and maculo-papular syphilides are not common in the colored; out of a total of 244 cases of secondary syphilis there were but 10 instances of the former and 4 instances of the latter. This type of eruption is just as rare in mulattoes as in the full-blooded negroes, so it cannot be explained by the color of the skin hiding the rather pale eruption.

Papular syphilis, in all of its forms, is common; there were 10 instances of the miliary or follicular variety and 43 instances of the annular type. Another kind of papule that is very rarely encountered in the whites is the large, semi-globular lesion, where each papule has a diameter of one-half inch or more; this variety is sometimes met in the negro.

Secondary pustular or papulo-pustular lesions are not at all uncommon, this series containing 12 cases.

It is very common to meet typical cases of secondary syphilis, in which there is absolutely no skin eruption, except perhaps condylomata; condylomata are certainly more common among negroes than among whites.

In proportion to the total number of cases of syphilis seen in the two races, tertiary syphilis is not more common among negroes, a statement with which Fox agrees. The nodular form is rather rare, and the palmar syphilides are indeed rarities.

Negroes attend a dermatological clinic for treatment of syphilis much better than would be believed. The clinic at Freedmen's has a number of cases that have been coming regularly for two or three years; the majority of southern physicians have not found this to be true, however.

TINEA CRURIS seems to be very rare in the colored, but tinea tonsurans is very common, especially among the very dark skinned. In this series of cases it was encountered 81 times, as against 32 times in the whites. Fox's figures show almost the same discrepancy. Negro mothers pay very little attention to ringworm.

TINEA VERSICOLOR is a disease that students almost never diagnose in the negro, probably because the spots, instead of being darker than the normal skin, are often considerably lighter.

TUBERCULOSIS of the skin, whether in the form of lupus vulgaris or of some other variety of infection with the Koch bacillus, is just as common in one race as in the other, a rather surprising fact, when one considers how common pulmonary tuberculosis is among the colored.

Both URTICARIA and giant urticaria are relatively more common among negroes. In the majority of instances it is possible to get a history of a heavy indulgence in cabbage as the cause of the outbreak. Many of the chronic cases give a positive Wassermann, and are speedily cured by the use of antisyphilitic treatment.

VITILIGO is more common than among the whites. In two remarkable instances this loss of pigment developed within 24 hours, there being marked constitutional disturbances at the time. In another instance the spilling of hydrocyanic acid on the skin seemed to cause the trouble, the lesions appearing just where the acid struck.

XANTHELASMA is almost unknown among negroes, even among mulattoes.

The ACUTE EXANTHEMATA run slightly different courses in the

two races. Both in ordinary measles and in German measles there is a marked tendency for many of the lesions to become papular or maculo-papular. In varicella it is surprising to find that a large number of adults are affected. Nearly one-fourth of my 38 cases were in adults. The lesions, both in children and adults, are often of a very small size, no larger than a pinhead.

In general, it may be said that the negro is a fairly docile patient, and that he usually tries to obey directions as faithfully as he can, and that he is rather good about returning for treatment—much better than the dispensary class of white patients.

CONCLUSIONS.

1. Mulattoes suffer more severely from skin diseases than do full-blooded negroes.

2. The following diseases are more prevalent among negroes than among whites: dermatitis papillaris capillitii, keloids, dry seborrhœa, syphilis, tinea tonsurans, urticaria and vitiligo.

3. The following diseases are less prevalent among negroes: alopecia areata, cancer, dermatitis actinica, acute eczema, erythema multiforme, furuncles and boils, angiomas and naevi, pediculosis capitis, psoriasis, rosacea, sycosis vulgaris, tinea cruris and xanthelasma.

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CLINICAL REPORT.

A CASE OF RINGWORM OF THE SCALP IN AN ADULT.

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THE literature of ringworm of the scalp contains reports of so few cases observed in adults, that it seemed to the writer that the following case history might be of passing interest to dermatologists, especially for statistical purposes.

CASE REPORT.

H. P., colored, 20 years old, laborer, nativity, United States. Admitted to the University and Bellevue Clinic, Dermatological Department, March 19, 1913.

For three weeks, the patient had noticed the appearance of small patches of baldness on his scalp, varying in size from $\frac{1}{4}$ to $\frac{3}{4}$ inch in diameter. With the exception of very slight pruritus, there were no subjective symptoms.

Objectively, the patient, a robust young negro, with the short "kinky" black hair of his race, presented a number of slightly scaly areas of thinned hair scattered over the scalp, two being located on the vertex and five over the occipital region. The borders were fairly well-defined; and the patches were generally circular or oval in shape, and resembled the dry seborrhœa so frequently encountered.

Microscopical examination of extracted hairs revealed the presence of mycelia and small spores.

On account of the rarity of tinea trichophytina of the scalp in adults, it was deemed wise to make several microscopical examinations. Specimens were therefore submitted for examination to various members of the College Staff, with entire confirmation of the original findings.

The patient was unable to state whether one of the lesions had antedated the others, not having been aware of the presence of the condition, until his attention was called to it.

He made only one visit to the Clinic; consequently no definite line of treatment could be pursued.

SOCIETY TRANSACTIONS.

NEW YORK DERMATOLOGICAL SOCIETY.

Regular Meeting, Mar. 24, 1914.

JOHN A. FORDYCE, M.D., *President*.

PSEUDO-PELADE. Presented by Dr. MacKEE for Dr. FORDYCE.

The patient was a widow, 40 years of age, from Dr. Wise's service at the Vanderbilt Clinic. She was born in Ireland and had been in this country for twenty years. The duration of her scalp trouble was two years. When presented to the Society there were multiple, poorly defined, irregular areas of atrophy associated with incomplete alopecia. There had never been nor was there any scaliness, erythema or other signs of inflammation. There were three dime-sized areas and one patch on the vertex which measured $1\frac{1}{2}$ by 3 inches.

DISCUSSION.

Dr. HOWARD FOX agreed that the condition was a form of so-called cicatrizing alopecia. He saw no scaling, to suggest a lupus erythematosus.

FIBROMYXOMA. Presented by DR. MACKEE for DR. FORDYCE.

The patient, a boy of 4 years, was from Dr. McMurtry's service at the Vanderbilt Clinic. The lesion for which the child was presented was first noticed three years ago. It was a dull-red, silver-dollar-sized tumor, situated on the inner surface of the right thigh, at about the junction of the upper with the middle third. The lesion was elevated about one-half inch above the surrounding surface. It was sharply margined but the surface was irregular, the growth being composed of several dime-sized nodules. The tumor was soft and compressible, but yet of a fairly firm consistence upon palpation. The mother stated that the lesion had grown considerably within the past few months. At a distance the growth markedly resembled a cavernous angioma which had undergone a certain amount of involution. But the red color did not disappear under the diascope as it would in an angioma. The histopathology was that of a fibromyxoma.

DISCUSSION.

DR. WHITEHOUSE said that clinically the lesion had the appearance of a vascular nevus.

DR. HOWARD FOX thought the most probable diagnosis from the clinical standpoint was a soft fibroma, although the appearance of the case was unusual. He thought a cavernous angioma could be excluded, as there was no change in the size or vascularity of the tissue upon pressure.

DR. FORDYCE agreed with Dr. Howard Fox that the lesion was a new growth of fibrous tissue, non-compressible, and presented none of the features of a cavernous angioma.

ACNE AND ROSACEA. Presented by DR. WINFIELD.

DR. WINFIELD said that Dr. Potter, of Polhemus Clinic, had asked him to bring this patient before the Society. He did not know anything of the history of the case, but it seemed to be one of acute rosacea with pustulation. The woman stated that she had had the eruption on her face since Christmas.

DISCUSSION.

DR. TRIMBLE said that the case had some of the features of bromide eruption, and also reminded him of some cases reported by Wende of dermatitis vegetans in children, that followed pus infections of the skin. Wende's paper was read before one of the dermatological societies several years ago and was published later. He was confident that one just looking at these photographs would think the lesions due to bromide, but they were proved to be otherwise. The case presented by Dr. Winfield seemed to have many of the same conditions. It might be a bromide condition, or a dermatitis vegetans supervening upon some infection of the skin.

DR. WISE said that in spite of the negative history he was strongly inclined to the diagnosis of bromide eruption.

DR. HOWARD FOX agreed with Dr. Wise that a bromide or possibly an iodide eruption should be suspected. In some cases it was difficult or impossible to distinguish these two forms of medicinal eruptions.

DR. WINFIELD said that he knew very little about the case and all that Dr. Potter could make out was an old acne. There was no history of either iodides or bromides having been taken.

CASE FOR DIAGNOSIS. Presented by DR. FORDYCE.

The patient, a girl about 26 years old, showed a large area extending almost from the knee to the ankle and involving two-thirds of the skin of the leg. The

centre of the lesion was dark red in color but was free from scar tissue. On the anterior surface of the left leg, just below the ankle, there was a lesion about the size of a silver half dollar, which had existed for a few weeks. This lesion was elevated and showed several points of suppuration. There was a similar lesion, but smaller in size, on the forearm. The eruption had spread serpigiously and strongly suggested a syphilitic or tuberculous process. She stated that she had had several epileptic attacks when 14 years old, and since that time had taken bromide almost continuously. The diagnosis made was a bromide eruption which was peculiar in that it had existed for twelve years and slowly spread in a serpiginous manner. The patient's Wassermann reaction was negative. The speaker stated that he was indebted to Dr. Ludwig Weiss for the privilege of presenting the case.

DISCUSSION.

DR. WHITEHOUSE said that such a lesion was a very unusual one for a bromide eruption, as it had existed for fourteen years and was limited to one side. It might, however, be possible, owing to the long continuance of the bromide, and he would consider it an atypical case of bromoderma.

DR. WINFIELD said that the new lesion on the other leg seemed to be a bromoderma.

DRS. CLARK, JOHNSON and WISE agreed with the diagnosis of bromoderma.

DR. MACKEE called attention to the fact that the serpiginous lesion had existed for fourteen years, yet there was no scarring nor atrophy, only a congestion. This would, the speaker thought, speak against a diagnosis of either syphilis or tuberculosis. An additional feature speaking against tuberculosis was the fact that active lesions had never recurred in the scar. Also, there were lesions on the other leg, which would lead one, although not very strongly, against the diagnosis of syphilis. The margin of the serpiginous lesion was somewhat verrucous and there were a few pustular lesions. These facts might cause one to consider the possibility of blastomycosis, tuberculosis and syphilis. The speaker understood that blastomycosis had been ruled out by a microscopical examination. The sections, too, contained nothing strongly suggestive of tuberculosis or syphilis. Repeated Wassermann reactions had been negative. A consideration of these findings, together with the fact that the patient had been taking bromide more or less steadily during the entire period of fourteen years, would certainly make the diagnosis of bromoderma very rational.

DR. KINGSBURY agreed with Dr. MacKee that syphilis and tuberculosis should be excluded, and thought that the small lesion on the other leg suggested a bromide eruption.

DR. SHERWELL was not prepared to make a diagnosis in this case, but as to the sharp delimitation on at least one of the lower limbs, he felt quite certain that it was caused by the application of the bandage with superimposed irritant dressings.

DR. HOWARD FOX had treated the patient four or five years previously, at which time the lesion looked very much as it did when presented, except that there was more crusting. He considered the case at that time as well as now to be a bromoderma. The long duration and the serpiginous border were rather unusual features, he thought.

DR. FORDYCE said that he had been unable to detect any lupus nodules in the involved area. There was also an absence of scar tissue. The edges of the lesions were elevated, papillomatous, and showed a more acute inflammatory condition than one would expect to find in lupus.

PITYRIASIS RUBRA PILARIS (?). Presented by DR. WISE.

The patient, Jacob J., was a man of 40 years, born in Russia. He was married twenty years ago and was the father of nine children, three of whom were living

and in good health. He was a bricklayer by occupation. In October, 1913, he was presented before the Dermatological Section of the New York Academy of Medicine by Dr. Lapowski, as a case of pityriasis rubra pilaris, and considerable discussion arose regarding this diagnosis. The disease began about seven years ago on the chest and the flexor surfaces of the arms, in the shape of red patches and scaly spots. There was much pruritus at that time. On the scalp, the scales appeared about two years ago and the alopecia followed soon thereafter. Since the beginning of this disease, there had been a gradual spread of the erythematous and scaly patches until there was a universal involvement of the integument. While under Dr. Lapowski's care he received 30 intragluteal injections, presumably of arsenic. The patient presented for examination a thin, glistening, dusky-red, wrinkled and atrophic skin, the process involving the entire integument with the exception of the palms and soles, which were thickened and horny. On the backs of the fingers and hands, there were present a large number of comedo-like follicular plugs. The face was red, tense and glistening in appearance; there were areas of alopecia of the beard and there was total loss of eyelashes; ectropion was marked. About two-thirds of the scalp was entirely denuded of hair; the scalp was tensely drawn over the cranium and was atrophic. On the legs there were several ulcerated areas, following traumatism from scratching, etc. The patient complained of pruritus and of feeling cold. The nails showed no marked changes. The Wassermann reaction was negative.

DISCUSSION.

Dr. SHERWELL inclined to the diagnosis of pityriasis rubra.

Dr. WHITEHOUSE said that he had seen but two cases of true pityriasis rubra of Hebra, one of them being a case that had been under Dr. Jackson's care some years ago. Both cases died after pursuing the usual course of pityriasis rubra; the exfoliation was in large flakes, with the shedding of the nails and hair, lasting many years before death ensued from pulmonary tuberculosis, kidney disease, or the usual termination of septic absorption. The picture of pityriasis rubra was well fixed in his mind, and he had not seen anything like it since, whereas this case was very much like pityriasis rubra pilaris. The lesions on the hands and fingers were characteristic of pityriasis rubra pilaris, whereas in pityriasis rubra of Hebra there was not the tylosis of the palms, as in this case and as in all cases of Dévergie's disease: besides, the general exfoliation was entirely different. Instead of the soft flakes, as in pityriasis rubra, this was a dry, squamous shedding of the epidermis. The scalp and nails seemed characteristic enough of Dévergie's disease, and the atrophy was not uncommon in some of these cases. It was rather unusual, however, for atrophy to develop after only seven years. It would certainly seem to be a case of pityriasis rubra pilaris and not pityriasis rubra of Hebra.

Dr. FORDYCE agreed with the diagnosis which Dr. Whitehouse had made and said that Dr. Whitehouse had presented very clearly the differential points between pityriasis rubra of Hebra and pityriasis rubra pilaris. The keratosis of the palms which this patient presented was very frequently met with in pityriasis rubra pilaris. The follicular involvement of the dorsal surface of the phalanges and over the wrist, in his own opinion, were absolutely typical of pityriasis rubra pilaris.

Dr. WISE said that he would have histological and serological examinations made and would report to the Society on the case at a later date.

CASE FOR DIAGNOSIS. Presented by Dr. WHITEHOUSE.

The patient, a man 57 years of age, was married and had one child who was 28 years of age and perfectly healthy. The patient denied syphilis and the Wassermann test was negative. The eruption began two months ago as a red spot

on the right side of the neck, which grew larger and formed ovoid plaques, raised and well defined in outline. These were gradually fading. Other lesions had appeared on the body, thighs and forearms, and there were a few on the face. Some of the body lesions were crusted, others, especially those on the arms, were hard, nodular and dull red in color, having the appearance of a syphilide. Some of the recent ones appeared to be vesicular at the summits and showed a slight tendency to grouping. There was moderate itching, which was worse at night. The throat was normal.

DISCUSSION.

Dr. HOWARD FOX thought that on superficial examination the case appeared to be an ordinary seborrhœic dermatitis. On account of the presence of subcutaneous nodules, he would hesitate to make a diagnosis.

Dr. SHERWELL said that at first glance he had thought it a typical seborrhœic dermatitis or eczema, and one in a typical location, but on a closer examination he believed that it might have been a precursory stage of something more serious,—in fact, mycosis fungoides.

Dr. KINGSBURY felt very much as Dr. Sherwell did about the case, and that before any other diagnosis was made the possibility of its being a premycotic stage should be excluded.

Dr. JOHNSTON was inclined to agree with the diagnosis of beginning mycosis fungoides. Many of the lesions were deeply seated, which would exclude seborrhœic dermatitis. The differentiation of the two conditions with the microscope was not a difficult matter.

Dr. CLARK said that the whole picture had changed very much within the last week or ten days, since Dr. Whitehouse first saw the case. At first, there was much less scaling and the patches were less erythematous. They were scarlet, succulent, circumscribed patches, like the one seen on the neck or like multiform erythema patches. On the legs there were rather distinct firm nodules, not scaly, and also on the arm. At that time a diagnosis of specific eruption was made. Since then, the patient had been taking rhubarb and soda internally and using a lotion, which seemed to cause a more scaly appearance than it originally had. When he had last examined the lesions in daylight under a glass, some of them seemed to have on top very small vesicles. Then, too, before the patient was plastered up with calamine, some of the lesions on the top were more or less grouped. On account of the changed character of the condition, he had brought the case for Dr. Whitehouse for demonstration, as he had no diagnosis to offer.

Dr. WINFIELD suggested that the seborrhœic appearance on the back might have been due to the treatment; it did not seem to be especially seborrhœic in character. In a few months, some of the deeper lesions might develop into mycosis fungoides, in spite of the absence of itching.

Dr. FORDYCE said that he had followed a case of mycosis fungoides for a period of years, and this patient had had repeated attacks of an eruption which at times had been vesicular. Vesicular eruptions were not common in mycosis fungoides, but he believed they were occasionally met with.

Dr. WHITEHOUSE said that he did not feel ready to make a diagnosis, but that one would scarcely expect it to be mycosis fungoides. The man seemed intelligent and responsible and gave a history of having had the condition for only two months. As Dr. Fordyce had said, the development of mycosis from eczematous areas was not uncommon in long continued cases where the eczema had gone on from year to year, but the character of these lesions, the sinking away and apparently melting in the centre, was not that of mycosis fungoides as he had seen it. Mycosis fungoides was a steadily progressive thing, which did not change in character. As Dr. Winfield had said, the itching was not a constant feature of mycosis, but its absence was very unusual. A biopsy would be made and the case would be reported at a later meeting.

ACNE VARIOLIFORMIS OR SYPHILIS. Presented by DR. MACKEE for DR. FORDYCE.

The patient was a married woman, 49 years of age, from Dr. McMurtry's service at the Vanderbilt Clinic. She was born in England and had been in the United States for twenty years. There was no history of syphilis. One month previous to presentation, a number of deep-seated papulo-pustules appeared on the forehead. Within two weeks the forehead was covered with these lesions and the eruption attacked the scalp. The individual lesions were the size of a split-pea, but by coalescence, dime-sized patches were produced. Many of the lesions were capped with a crust or scale. New lesions continued to develop, while the older ones involuted spontaneously, leaving irregular, pitted scars. The color was raw-ham and there was some pigmentation. The patient stated that this was the first attack. A Wassermann reaction had been performed but the result had not been obtained.* There had been a marked improvement under the influence of sulphur ointment. Antisyphilitic treatment had not been administered. Dr. MacKee was inclined to regard the case as one of syphilis on account of the large number of lesions that had developed in such a short time, the raw-ham color, the coalescence of the lesions, the crusting and the irregular outline and shallowness of some of the scars. The fact that the condition improved under the influence of sulphur ointment, would not, in the speaker's opinion, rule out the diagnosis of syphilis.

DISCUSSION.

DR. TRIMBLE and DR. JOHNSTON agreed that the diagnosis was acne varioliformis.

DR. CLARK hesitated to suggest the possibility of its being syphilis but certainly there were rather indurated papules showing a serpiginous edge on the ridge of the nose, extending down one side and across on the other. He had seen cases of syphilis which represented as much atrophy, with the general appearance of lupus erythematosus,—very much such an appearance as this. The pit marks did not seem to be very distinct, and it seemed doubtful if the lesions would leave sharply punched-out pits. He was inclined to consider it a case of syphilis.

DR. WINFIELD said that it did not impress him as syphilis. If it were not an acne varioliformis, it might be an ordinary pus infection on an old skin that was not very well cared for.

DR. HOWARD FOX thought there were several strong arguments against the diagnosis of an ulcerating nodular syphilide. The lesions were symmetrical upon both sides of the forehead, and there was practically no grouping or infiltration. The pitting suggested acne varioliformis.

DR. JACKSON did not think it was syphilis and doubted whether it was an acne varioliformis. Of course, the appearance might have been due to the applications that had been made. It was highly inflammatory and very superficial, and suggested a secondary pus infection.

DR. FORDYCE said that when the patient presented herself at the clinic the lesions were encrusted and many of them presented the characteristic appearance of the lesions of acne varioliformis. The acute development of the process and the papular lesions about the root of the nose made him suspect syphilis, and he had asked that the Wassermann test be made.

LEPROSY. Presented by DR. WINFIELD.

The man was 37 years of age, and was born in Jamaica, of English parentage. The family history was negative. He was a perfectly healthy child and had none

* The Wassermann reaction was strongly positive.

of the so-called children's diseases. Since living in a malarial district ten years ago, he had had several attacks of malaria. He was a banana planter by occupation. Has never had syphilis or gonorrhœa. Four years ago he noticed an eruption of small pustules on the back of the right hand. This eruption had never been entirely well. At times, the skin over the back of the hand was greatly swollen. The skin of the right hand was darker in color and was somewhat thickened. The nails were affected. The man's general condition had improved since he had been in a colder climate.

DR. WINFIELD said that while he could not see any suggestion of pellagra in the case, the man had had a dermatitis for four years. Three of the nails on one hand suggested ringworm. The distal third of the nails showed various dystrophic changes, and both hands were asymmetrically affected,—suggesting ringworm very strongly. The scaling of the hands could also be caused by ringworm. Dr. JACKSON had presented a case of ringworm of the nails at the last meeting, with diffuse scaling of the hands. There seemed but little to suggest Hansen's disease.

DISCUSSION.

DR. JACKSON said that he saw nothing in the case to indicate leprosy. The appearance of the nails might have been due to ringworm. The microscope would decide.

DR. SHERWELL said that he did not know what it was, but in his opinion it certainly was not pellagra. He himself had been the earliest observer of pellagra in this country. He had seen some cases in Italians, and in 1883 had published an article on the subject. The man did not indeed complain of any loss of sensation, but the skin was thickened and depressed. He could not say what the nail lesion was, excepting perhaps some dystrophic change due to leprosy.

DR. KINGSBURY did not think that pellagra should be considered. The fact that the man came from Jamaica would suggest the diagnosis of leprosy rather than the clinical picture. The finger nails suggested a parasitic condition.

LYMPHANGIOMA. Presented by DR. MACKEE for DR. FORDYCE.

The patient was previously demonstrated at the December, 1913, meeting of the Society. The eruption consisted of thick-walled vesicles on the scrotum, penis and pubic region and was accompanied by considerable œdema. While the eruption never entirely disappeared, there were periodic exacerbations which were preceded and accompanied by chills and fever. The histopathology was that of lymphangioma. The clinical picture resembled elephantiasis and lymphangioma. The duration was twelve years. The disease began a few years after a trip to the tropics. The blood had been tested both by day and by night, but filaria had not been demonstrated. Treatment had consisted of staphylococcic and streptococcic vaccines and quinine. The only improvement noted was a disappearance of numerous furuncles on the legs.

DISCUSSION.

DR. WHITEHOUSE thought that a careful examination would reveal filaria.

DR. JOINSTON thought Dr. Winfield's suggestion of filariasis very reasonable.

DR. KINGSBURY and DR. SHERWELL thought that the case deserved careful examination for filariasis.

DR. JACKSON said that the history of the case as well as the clinical appearance certainly indicated elephantiasis.

DR. HOWARD FOX said that this was one of the few cases of elephantiasis seen in New York in which a filarial origin seemed probable. The history of a residence in the tropics and of febrile attacks certainly favored this idea. He thought that the chances of finding the embryos would be greatest if the blood were taken at midnight, especially if the patient had previously been allowed to sleep.

DR. FORDYCE said that in this climate it was not unusual to see cases of pseudo-elephantiasis of the leg with recurring attacks of erysipelas, the attacks of erysipelas being followed by an increase in the local condition. In one of these cases, he had discovered the streptococcus by cultures. In the case he presented to-night, it was possible that the filaria might yet be discovered.

NEW YORK ACADEMY OF MEDICINE,

SECTION ON DERMATOLOGY.

Regular Meeting, Mar. 3, 1914.

WILLIAM B. TRIMBLE, M.D., *Chairman*.

CASE FOR DIAGNOSIS. Presented by DR. CLARK.

Mr. J. C., aged 20 years, single, born in the United States. The disease appeared three years ago and involved the trunk and upper extremities when presented. It began on the arms and reached the extent and intensity seen on presentation about seven months ago, but new lesions were still developing. Many scattered purpuric spots, one-sixth to one-half inch in diameter, were present. There was little or no infiltration. The scaling was inconspicuous, though some scaling of older lesions was visible. The lesions did not itch.

DR. MACKEE said this was a case of purpura. The eruption appeared in crops of bright red lesions which did not disappear under pressure and which on fading left a purplish stain. The few annular lesions which were present were formed by coalescence and not by an extension of single papules and were much fewer in number than would be the case in Majocchi's disease or in angioma serpiginosum.

CASE FOR DIAGNOSIS. Presented by DR. CLARK.

Mr. M. P., 28 years of age, single, Austrian Jew; occupation, sweater-maker. Mother died of consumption. Father had heart disease.

He had had measles, no diphtheria, no scarlatina, no whooping cough and no chronic cough. The present illness began about 13 years ago on the front of the right leg, as a "pimple" or red spot, spreading thence over both legs. It attained the existing extent 7 or 8 years ago.

Both legs over the shins were involved. There was a red-brown, shiny patch, 8 inches long, surrounding the front half of the legs, just above the ankle, less broad above and below. There was slight induration of the lesions, the skin looking stretched and shiny, not scaly. No outlying spot was seen; there was slight induration at the edges and the edge was fairly sharply defined.

SARCOMA OF THE NOSE. Presented by DR. KINGSBURY.

Mr. S. K., 21 years of age, was born in the United States; occupation, driver. The tumor developed on the bridge of the nose $2\frac{1}{2}$ years ago. It was excised on July 13, and reappeared about 2 months later, and since then had gradually increased in size.

PITYRIASIS ROSEA OR SEBORRHŒIC DERMATITIS? Presented by
DRS. MACKEE AND WISE.

The patient, Miss L., a single woman, 28 years of age, and a saleslady by occupation, was from Dr. Fordyce's Clinic.

Three weeks previous to presentation she had a macule, the size of a quarter, on

the upper part of the inner surface of the left thigh. A few days later, small, scaly macules appeared on the trunk, thighs and arms. Immediately preceding this eruption, the patient had had an attack of scabies for which a 10% sulphur ointment had been applied. When presented to the Society, there were lesions on the chest, back, abdomen, neck, arms and legs. The lesions consisted of dull-red, solid, scaly macules, which in size varied from a split pea to a quarter. Many of the lesions lacked a sharply defined margin. The scales were waxy. They were two annular or circinate lesions on the left breast, otherwise all the macules were solid. There were a few lesions showing a wrinkling of the skin and a yellowish appearance, but most of them were a dull red. There were no lesions on the face and only slight pityriasis of the scalp. The macules did not follow the lines of cleavage of the skin. The lesions were most numerous on the chest and the sides of the trunk.

DR. TRIMBLE said that in his opinion this was a case of pityriasis rosea. Some of the lesions were circinate with slightly raised borders and typical buff-colored centres.

DR. McMURTRY said that this was pityriasis rosea, as the scalp was entirely free from disease, whereas it should be involved in a case of dermatitis seborrhœica. The sebaceous glands, always affected by the latter malady, were in this case strikingly normal.

SYPHILITIC LESIONS OF THE THROAT. Presented by Drs. MacKEE AND WISE.

This boy, W. B., aged 7 years, from Dr. Fordyce's clinic, was presented at the February meeting of the New York Dermatological Society. The child had a papulo-necrotic tuberculide, scrofuloderma and lesions of the mouth and throat resembling moist papules of syphilis. The throat lesions were of three weeks' duration.*

DR. TRIMBLE agreed with Dr. Pollitzer that the age of the child was against a diagnosis of syphilis for the lesions in the mouth. Clinically, however, they resembled condylomata, and he thought they would disappear under treatment with salvarsan.

DISSEMINATED AND DIFFUSE PURPURA. Presented by Drs. MacKEE AND WISE.

The patient, Rose C., was 12 years of age, and was under observation at Dr. Fordyce's clinic.

The eruption began four days previous to presentation, since which time new lesions had appeared each day. There had been no pain nor had there been any rheumatic manifestations. The patient was suffering, however, from sore throat at the time the eruption appeared. When presented to the Section, lesions were exhibited on the buttocks, legs and ankles. They consisted mainly of pin-head to split-pea sized, hæmorrhagic macules. On the inner surface of the left thigh there was a large, oblong-shaped, red patch, with sharply defined but irregular margin. On the ankles there were numerous pigmented spots, also some violaceous macules, showing various stages of retrogression. There was, also, a marked keratosis pilaris of the legs and some of these follicular lesions were hæmorrhagic. The physical examination was negative.

TUBERCULOSIS CUTIS VERRUCOSA OR BLASTOMYCOSIS? Presented by DR. TRIMBLE.

The patient was a young man, aged 19. The disease appeared 17 years ago. His health had always been exceptionally good, except for the skin lesion. The

* The throat lesions disappeared after one injection of salvarsan.

lesion in question was about 6 by 10 inches in size. It was warty and infiltrated and there were areas filled with small cutaneous abscesses. It had made an attempt to heal in the centre. It had been X-rayed for one year, without result.

Biopsy: Some spots showed double contoured lesions, suspicious of blastomycosis. Small cutaneous abscesses under the crust were demonstrable.

Dr. MacKEE said that the large amount of pus favored the diagnosis of blastomycosis rather than that of tuberculosis.

Dr. TRIMBLE, closing the discussion, said that he thought the long duration of the disease was rather in favor of tuberculosis and that many cases of cutaneous tuberculosis persisted for many years without affecting the general health of the patient.

BLASTOMYCOSIS. Presented by Dr. TRIMBLE.

The patient was a man aged 25 years. He was of Italian parentage. Situated on the right buttock was an infiltrated, verrucous lesion about 6 inches long and 4 inches wide. The duration was a year. It was studded with cutaneous abscesses. At the time of presentation the surface was moist and granulomatous, the crust having been removed by treatment. The case had been previously shown.

LENTICULAR CARCINOMA. Presented by Dr. TRIMBLE.

The patient was a woman, 35 years of age, born in the United States. The disease appeared two years ago, when a small nodule was noticed in the breast. This was removed in April, 1912, but recurrence followed in about 8 months' time. Radical operation was then performed, April, 1913. The condition remained quiescent for a time, but scattered nodules began to develop in October, 1913.

LICHEN RUBER ACUMINATUS. Presented by Dr. TRIMBLE.

The patient was a young man, aged 21 years, born in the United States. The condition had existed for 5 years. He had had a so-called attack of eczema 9 years before, but this had healed readily. The lesion presented was distinctly follicular on the trunk and erythematous on the face. There was a great amount of pityriasis associated with the lesion.

Dr. Lusk said that on account of the absence of any lesions on the backs of the fingers, the thickening of the skin over the whole back, and the predilection of the eruption for the axillæ and groins, he thought the disease was chronic seborrhœic dermatitis.

Dr. TRIMBLE, closing the discussion, said that he had excluded eczema on account of the presence of distinct follicular lesions on the abdomen, many of them capped with scales and without exudation, and on account of the long duration. The patient had a marked pityriasis on the scalp, and he believed if left alone, the scaling would be a permanent feature on the body also.

MULTIPLE BENIGN SARCOID. Presented by Dr. TRIMBLE.

The patient was a woman, 28 years of age, born in Roumania. The condition had existed for 9 years. It began by the formation of a small, pinkish, somewhat livid, slightly elevated nodule in the centre of the forehead. Following this, several new lesions made their appearance in the same locality, and one appeared on the left side of the face, about the angle of the jaw. This latter lesion increased in size slowly, was only slightly infiltrated and quite flat. It was about the size of a silver dollar, and there was distinct atrophy in the centre. The Wassermann reaction was negative.

This patient had been shown before the Section about two years ago. In the interval there had been a marked atrophy in the middle of the large lesion near the left angle of the jaw, while the others were enlarging.

REVIEW
OF
DERMATOLOGY AND SYPHILIS.

Under the direction of
FRED WISE, M.D., New York.

Assisted by

CLARENCE A. BAER, M.D., Milwaukee.	ERNEST L. McEWEN, M.D., Chicago.
PAUL E. BECHET, M.D., New York.	M. L. RAVITCH, M.D., Louisville.
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ROBERT C. JAMIESON, M.D., Detroit.	JOHN H. STOKES, M.D., Ann Arbor.
FRANK C. KNOWLES, M.D., Philadelphia.	HARVEY P. TOWLE, M.D., Boston.

ARCHIV FÜR DERMATOLOGIE UND SYPHILIS.

(September, 1913, cxviii, No. 1.)

Abstracted by JOHN H. STOKES, M.D.

ON THE PATHOLOGY OF THE GENERALIZED EXFOLIATIVE ERYTHRODERMIAS. O. SACHS, p. 209.

Sachs reviews a number of reported cases of dermatitis exfoliativa and pityriasis rubra (Hebra) from the continental clinics, with special attention to the associated occurrence of adenopathies of a purely tuberculous and pseudoleukæmic tuberculous type, and of forms of visceral tuberculosis. He reports in detail a case presented by Finger, of generalized exfoliative erythrodermia with the general picture of an extensive lymphatic tuberculosis, following a pseudoleukæmic course. The blood showed 48% lymphocytes and a marked eosinophilia (10% to 15%). Tuberculous changes were demonstrable in the glands at autopsy, but no bacilli or Much's granules were found. Sachs finds himself in accord with previous histological findings in the involved skin. These include infiltrates rich in eosinophiles but poor in mast-cells, chronic inflammatory changes, thinning of the epidermis, scarcely marked enough for atrophy, and polymorphous perivascular infiltrates. An interesting suggestion associates the pruritus observed in this and other types of cases, with the adenopathy, explaining it as a phase of the autointoxication from the products of the pathological process in the lymph nodes. Symptomatic therapy was a failure in this case, but Mook's use of intravenous quinine injections is mentioned. Sachs suggests that a rational therapy in cases where the tuberculous basis of the process in the lymph nodes can be established, should include tuberculin and heliotherapy, and that in leukæmic and pseudoleukæmic types, benzol and actinotherapy would be appropriate. The use of an extract of normal lymph glands might open a new field, by furnishing a physiological antidote to the toxic substances liberated by the diseased nodes. These toxic substances are regarded by Sachs as responsible for the cutaneous reactions comprised under the term exfoliative erythrodermias. One hundred and twenty-four titles are cited in the literature.

ON THE ETIOLOGY OF "PEMPHIGOID" (PEMPHIGUS NEONATORUM RESP. INFANTILIS), ITS RELATION TO THE DERMATITIS EXFOLIATIVA NEONATORUM OF RITTER VON RITTERSHAIN AND TO IMPETIGO CONTAGIOSA (S. VULGARIS). STAPHYLOGENES. L. HOFFMANN, p. 245.

The writer reports a case of infantile "pemphigoid" in which the staphylococcus was identified as the ætiological factor, by bacteriological examination. The production of a bullous eruption by staphylococci as well as streptococci is discussed. In this case the mother was the probable source of the child's infection, and she presented both clinically and bacteriologically a case of impetigo vulgaris. When first seen, the child presented a typical dermatitis exfoliativa which underwent a transformation into pemphigus neonatorum while under observation. The author's résumé comprises the following conclusions:

(1) "Pemphigoid" of the newborn is essentially a staphylococcic infection; (2) staphylococci are capable of being solely responsible for a combination of pyoderma with bullous eruptive features in older children; (3) the common ætiology of dermatitis exfoliativa neonatorum and "pemphigoid" of the newborn is argued from the transition from one into the other, witnessed in the present case; (4) the fatal outcome may be due, as in this case, to a staphylococæmia.

FURTHER CONTRIBUTIONS ON DERMATOSIS DYSMENORRHÆICA SYMMETRICA (MATZENAUER-POLLAND). R. POLLAND, p. 260.

Polland takes up the cudgels in defense of the recently described clinical entity of dermatosis dysmenorrhæica symmetrica, and stoutly repudiates the hostile suggestion that the condition is indigenous only to the vicinity of the Graz clinic. A number of very interesting new cases are presented, including a note on the one described by Friedberg in Breslau. The following essential features of the disease are recalled by the descriptions. The disease occurs only in women, presenting the symptoms of abnormal ovarian function, especially menstrual irregularities. A positive lipid reaction is obtained from the blood, by the method of Neumann and Hermann. The onset occurs suddenly, with subjective symptoms of stinging and burning, and objectively a perifollicular vascular dilatation, with vesicle formation and oozing. In severe cases, follicular infarct-like necroses may develop, with a slough and subsequent scarring. The efflorescences are generally symmetrical, with a tendency to linear configuration on the extremities and a patchy contour on the face. The first appearance tends to be on the latter site, with extension to the body, involution and cyclical reappearance upon the face. Polland regards the condition as incident to a disturbance of the internal secretion of the ovaries and has obtained gratifying therapeutic results in some of his cases from the use of "Ovaradentriferrin." He feels that there is a circulating toxin among the ætiological factors in the disease, and that the lipid reaction of the blood supports this contention. A number of cases are cited in elaborating the differential diagnosis between this condition and various herpetiform efflorescences which the author regards as essentially dermal neuroses.

THE CARE OF SYPHILITICS AND THE PROPHYLAXIS OF LUES IN NÜRNBERG IN THE YEARS 1498 to 1505. KARL SUDHOFF, p. 285.

This is an historical study from the original sources, whose subject-matter is indicated by the title.

ON THE ORIGIN OF PIGMENTED NÆVI. J. KYRLE, p. 319.

Since the publication of his communication in the *Archiv für Dermatologie und Syphilis*, xc, the writer has prosecuted further studies which have led him

to abandon his earlier belief that the *naevus* cell has its origin in the connective tissues, and to accept the view of Unna that it is of epithelial derivation. His earlier opinion was based on the finding of connective tissue fibrillæ between the individual elements of *naevus*-cell groups, and on the fact that he could demonstrate no actual transition from epithelial to *naevus*-cell types. His new results are based on the study of a small, very recently formed pigmented *naevus*, and emphasize the importance in histopathological studies, of working with early stages. He feels that his material demonstrates beyond further doubt the direct origin of the *naevus*-cell from the epithelium of the skin, and presents drawings from his sections, illustrating the "budding-off" process. Groups of *naevus*-cells were also demonstrable in the epidermis itself, surrounded by typical epidermal cells. The origin of the pigment, Kyrle is led to believe, both in the normal epidermis and in the pigmented *naevus*, rests with the basal or later *naevus*-cell, a view antagonistic to the melanoblast conception of Kreibich.

ON THE TREATMENT OF DERMATOSES BY CARBON DIOXIDE SNOW.

P. HASLUND, p. 336.

The writer speaks with well-balanced enthusiasm of the efficiency of this therapeutic agent in a variety of conditions. His equipment, as described, is simple. The methods and results are briefly given under the following heads:

Lupus erythematosus. 84 cases. Twelve seconds' exposure with rather firm pressure. Six seconds sufficient on the lip. A superficial necrosis does no harm. Cases previously treated with Roentgen ray must be managed with circumspection, since they react more strongly and so require shorter exposures. Light treatment, however, does not affect the reaction. Heavy crusting must be removed with ointment and plaster and exposures may reach twenty seconds in such cases. Cases with marked scaling and atrophy often react better than purely erythematous ones. No relapses have been seen thus far, almost all cases are improved and a number absolutely and rapidly cured. The writer regards this as the best method in use for the treatment of this condition.

Rosacea. 7 cases. Applicable only to cases in which there is no acne. Exposure, 6 to 7 seconds, never over 10. Pressure, very light. Vesicle formation usually occurs, with subsequent blanching of the skin without visible scar. A half-year of observation on one case has shown no recurrence.

Naevus. 55 cases. The results are somewhat uncertain. With flat vascular *naevi*, exposures of 10 to 15 seconds were used, with heavy pressure. For extensive vascular *naevi* the author prefers radium or light-treatment. Circumscribed small cavernous angiomas require 12 to 20 seconds. Pigmented *naevi* require 12 to 15 seconds with very heavy pressure. If small and treated with a single exposure, the frozen area must run well out into normal skin or the subsequent scar will show a pigmented ring. Hairy *naevi* often require repeated freezing and the hair may well be epilated or removed with pumice-stone as a preliminary, since it has an insulating effect. Verrucous *naevi*, 15 seconds to one minute, with very heavy pressure. The writer regards the use of carbon-dioxide snow as the method of election in the treatment of the forms of *naevi* mentioned.

Verruæ. Single or repeated freezings, 30 seconds to one minute, are effective. The wart should be lifted off the underlying tissues by the reaction and rest upon the summit of the blister. If the exudate is gelatinous or hæmorrhagic rather than serous, remove wart and blister together. If parts of the base remain, remove them with forceps. The resulting ulcer heals well. For *verruæ planæ juveniles* the writer advises Roentgen ray if the lesions are numerous.

Epitheliomata. Although he has had some successful results, the writer does not feel this method of extirpation to be adequate for any but the smallest carcinomata.

Lupus vulgaris. The writer does not feel the method to be applicable to advantage in these cases, believing it to be too superficial.

Psoriasis. Although the disappearance of some obstinate lesions could be brought about, the reactions were severe. Exposures should be very short and the method is not recommended.

Keloid. Improvement in two cases.

Chronic ulceration from X-ray. Ten sittings, 10-second exposures, astonishing improvement. Method excessively painful.

In general, an inadequate reaction calls for another exposure at the same spot.

ON A RARE FORM OF ERYTHEMA (ERYTHEMA CHRONICUM MIGRANS). B. LIPSCHUTZ, p. 348.

The lesion in the reported case consisted of a ring of hyperæmia whose greatest observed diameter was about 50 centimetres, with the centre in the region of the left trochanter. The enclosed skin was practically normal. The ring itself was slightly elevated above the surrounding surface, was of a pinkish red color and about one-half centimetre in width. The erythema disappeared completely on pressure. The neighboring skin occasionally assumed a pinkish or cyanotic tinge. There were few or no symptoms, the skin elsewhere on the body was normal and the woman was in good general health. The ring gradually increased in diameter while the patient was under observation. The total period of observation was seven months. Histopathological examination showed little except vascular dilatation and slight round-cell infiltration with no findings to suggest the ætiology. In differential diagnosis, Rosenbach's erysipeloid, "roseole tardive" and the more familiar toxic erythemata were considered. Therapy had no effect.

ON GLYCOGEN AND ELEIDIN IN THE EPIDERMIS. S. HANAWA, p. 357.

Working under Jadassohn's direction, Hanawa undertook to confirm and elaborate the work of Unna and Golodetz on the histology and microchemistry of glycogen and eleidin. An elaborate and painstaking study led to the following conclusions. (1) Evidence of the presence of glycogen, by the Best method, is found in the sweat glands of the sole of the foot in adults almost invariably. (2) Elaborate tinctorial and chemical reactions show that the deeper layers of the stratum corneum apparently contain glycogen-like substances. (3) Certain relations appear to exist between eleidin and glycogen and (4) between these two and a substance called by the writer "hæmatox-eleidin" occurring as granules and drop-like bodies in the stratum granulosum, distinguishable from both glycogen and eleidin, and appearing only after alcohol-water treatment of the material.

ON TYPHUS EXANTHEMATICUS. L. ARZT AND W. KERL, p. 386.

The observations on typhus fever here presented were made during an epidemic in the early part of 1913. The source seems to have been the influx of persons returning by shipboard from the scene of the Balkan wars at this time. The conclusions may be briefly summarized as follows: (1) No data on incubation were obtained. (2) As regards the course of the fever the cases showed a marked diversity of type. (3) The importance of the eruption as a diagnostic feature is emphasized. The first signs appear on the third or fourth day, are few in number, localized especially to the flexor surfaces of the forearms and the flanks, and are of a pale rose-red, very suggestive of an involuting syphilitic roseola. Later petechial hæmorrhage occurs into the macules and they assume a copper color. The macules are followed by lentil-sized or smaller nodules which subside into macules. A confluent hæmorrhagic form was seen. No scaling or desquamation was noted, and the palms and soles remained clean. (4) The internal findings were not striking considering the severity of the infection. Urine and blood showed little of interest. (5) Repeated examinations of the blood with dark-

field and by staining, showed no organisms. Splenic pulp smears however, showed a diplococcus, Gram positive, often in short chains. Inoculations of rabbits with defibrinated blood were negative. No specific serological reaction could be obtained, using the liver of fatal cases of the disease as antigen. Pathological findings showed only slight hæmorrhage into the pleura and endocardium, large spleen, cloudy swelling in the liver and no changes in the gastro-intestinal tract. The differential diagnosis is fully discussed. Therapy was symptomatic and directed against the high temperature and cardiac and pulmonary symptoms. Salvarsan is suggested empirically but was not tried. Rigid isolation and quarantine and the exclusion of vermin are the principal points mentioned under sanitary control. The literature is fully reviewed and there is a very lengthy bibliography.

DEUTSCHE MEDIZINISCHE WOCHENSCHRIFT.

(May 21, 1914, xl, No. 21.)

Abstracted by CLARENCE ALLEN BAER, M.D.

SYPHILITIC MYOCARDITIS. FRITZ ROSENFELD, p. 1044.

The author reports the history and necropsy of a case of gumma of the heart. Is it possible to diagnose syphilitic disease of the heart during life? Gummata might heal completely as can be demonstrated at necropsy. Most cases die suddenly or pass away with pneumonia or tuberculosis and the gumma in the heart is found only at section. It is usually impossible to make a diagnosis during life.

RELATION OF ANAPHYLAXIS, URTICARIA AND ALBUMEN ASSIMILATION. HANS MÜHSAM AND JULIUS JACOBSON, p. 1067.

The authors examined the sera of two patients suffering from urticaria after the ingestion of crabs and found that the sera reacted to an extract of crab albumen as long as urticarial symptoms were present. There is present in some individuals a definite substance that when introduced into the intestines produces anaphylaxis. At this time the blood serum of that individual contains a specific ferment extract that is absent at other times. This specific ferment is present in the blood and therefore there must be present, primarily, a permeability of the intestinal epithelium permitting the absorption of the ferment. Neither Abderhalden nor Wolff-Eisner explain the specificity of the ferment and the permeability of the intestinal wall.

(*Ibidem*, May 28, 1914, xl, No. 22.)

ABORTIVE TREATMENT AND NEURO-RECURRENCES IN THE MODERN SYPHILIS THERAPY. WERTHER, p. 1099.

The author gives a résumé of the present knowledge of the treatment of syphilis; cites some of his own cases; and gives the following rules for salvarsan therapy in secondary syphilis:

1. Never give only one salvarsan injection.
2. Never give salvarsan alone.

3. Give a preparatory mercury course of 14 days in order to prevent brain reactions, then administer salvarsan once weekly, for 3 or 4 weeks.

In primary syphilis salvarsan should be pushed hard. Half of all primary syphilitic cases can be cured by salvarsan.

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(*Ibidem*, June 4, 1914, xl, No. 23.)

THE VALUE OF SALVARSAN IN THE ABORTIVE CURE OF SYPHILIS. ERICH HOFFMANN, p. 1168.

The author states that an early diagnosis of syphilis makes it possible, in the great majority of cases, to effect a cure in abortive syphilis. This is obtainable by means of an intensive combined mercury-salvarsan treatment, whose quantitative worth can be watched by the curve of the Wassermann reaction, which should be preferably carried out too intensively rather than too mildly. In addition to intensive mercury treatment (42 inunctions or a corresponding number of injections), 4 to 6 or 7 to 8 old salvarsan injections, every one as high as 0.4 (not higher) is the method of procedure advised to secure a permanent result.

When this series of treatments is concluded, the result is controlled by: First, accurate clinical and serological examination; second, excision of the scar of the chancre at the end of treatment, histological examination and search for *Spirochaeta pallida* in dark field and by vaccination; third, the provocative salvarsan infusion, after about 15 months, with an examination of the spinal fluid about 10 days after the infusion. If these tests be negative and the patient remain free of every symptom for over one and one-half years, then one can count the case completely cured. In stubborn cases the second treatment as outlined can be given after the provocative salvarsan infusion.

The most important question in the fight against syphilis is in that the disease is cured at the onset and its transmission becomes impossible.

(*Ibidem*, June 11, 1914, xl, No. 24.)

IS THERE A PATERNAL TRANSFERENCE OF SYPHILIS? FRANZ BRÜCK, p. 1224.

The author criticizes the statement of Lesser and Carsten in No. 15 of this Journal in which they say that there is no paternal transference of syphilis, and their vaccination experiments with syphilitic sperm in monkeys and rabbits supports this statement. The two experimenters differentiate between sperm and spermatozoa; that the sperm of syphilitic patients is infectious is naturally true. The spermatozoön that penetrates the ovum is the only one that could possibly carry any syphilitic infection. Experimentally this is impossible to prove and, therefore, the question must still remain open. Therefore, one cannot say that syphilitic infection is produced only by infection of the mother and thus indirectly the child.

(*Ibidem*, June 18, 1914, xl, No. 25.)

CONTRIBUTION TO THE EXPERIMENTATION FOR PURE CULTURE OF THE CAUSE OF SMALLPOX. G. SEIFFERT, p. 1259.

Seiffert has been going over very carefully the work of Formet in which the latter had been able to secure a pure culture of the cause of smallpox. Formet sent the author his own cultures and description of the technique for growing same. Seiffert concludes that after many attempts and careful endeavors he was unable to produce a pure or transfer culture of the so-called cause of smallpox. Therefore, we cannot at the present time say that an organism causing variola has been cultivated.

REMARKS CONCERNING THE LIST OF SALVARSAN AND NEOSAL- VARSAN FATALITIES PREPARED BY MENTBERGER. J. BENARIO, p. 1262.

The author makes a critical study of the 274 salvarsan and neosalvarsan fatalities as collected in the book by Mentberger called "The Development and Present Position of Arsenic Therapy in Syphilis."

Of the 274 cases of death reported from the use of salvarsan and neosalvarsan 41 were not syphilitic. The fatalities can be divided into three groups:

First, those directly poisoned by the arsenic.

Second, those that had some indirect connection with arsenic.

Third, those in which arsenic would have been contraindicated.

The first group contained 87 cases. The majority of the cases in the first group were in the secondary stage of syphilis, although 5 of those in the primary stage had already a positive Wassermann reaction. Of all the fatalities 38 cases were due to over-dosage; 22 deaths occurred in the so-called third stage of syphilis, that is, cerebral syphilis, tabes or general paralysis.

Careful study of the 41 cases of death of non-syphilitics shows that the fatalities were not due to either salvarsan or neosalvarsan, and therefore do not belong in the book.

TECHNIQUE OF INTRASPINAL SALVARISAN THERAPY. S. TRUSZEW-SKI, p. 1272.

This is a short résumé of the work along this line done by the author. He prefers the Swift-Ellis method as the simplest and surest.

(*Ibidem*, June 25, 1914, xl, No. 26.)

THE RELATIONSHIP OF NEW-BORN SYPHILITIC CHILDREN TO THE WASSERMANN REACTION. FRITZ LESSER AND RICHARD KLAGES, p. 1309.

The authors conclude that the principal thing in doing the Wassermann reaction is to test the unknown serum with various antigens. The substance in which the antigen extract is contained (alcohol or ether) is more important than the origin of the extract (heart or liver). If a serum should react sometimes negative and sometimes positive toward various antigens, the results should be considered positive.

THE VALUE OF THE ROENTGEN RAYS IN THE TREATMENT OF DEEP SEATED SKIN CANCERS. P. WICHMANN, p. 1310.

The author concludes, after presentation of various cases of deep seated skin cancers, that Roentgen rays are not sufficient for the treatment of deep seated skin cancers even if the efficacy of the rays be increased by various filters or different makes of tubes. Surgical interference is the best procedure, but radioactive substances other than X-rays may be used with effect.

MUENCHENER MEDIZINISCHE WOCHENSCHRIFT.

(October 28, 1913, lx, No. 43.)

Abstracted by A. W. STILLIANS, M.D.

FURTHER CONTRIBUTIONS TO SYPHILITIC REINFECTION AND TO THE BIOLOGY OF HUMAN SYPHILIS. GENNERICH, p. 2391.

A number of writers on this subject have insisted that to establish a case of second infection with syphilis the possibility of chancre redux or the so-called solitary secondary lesion must be excluded. The author agrees with this; but with R. Mueller prefers to consider the solitary secondary lesion of Thalmann a mono-recidive. He saw such lesions in the days of mercury treatment, and explains them as a result of insufficient treatment, which has been just enough to stop the

general diffusion of the infection without bringing about a complete cure. The formation of antibodies is stopped, and the unkilld foci of *Spirochæta pallida* find conditions favorable for rapid local development.

In regard to insufficient treatment, he cites Fischel, who found spirochæta in the scar of the chancre after a 5 weeks' course of inunctions with 4 injections of neosalvarsan. The author himself saw his only two recurrences in the past year and a half, in cases which had received 15 injections of calomel and 9 of neosalvarsan. The idea of Ravaut that a too intensive treatment disturbs the course of syphilis and predisposes to local recurrences he emphatically rejects, stating that the weak treatment is the faulty one, and that "every early case of lues must be treated to sterilization without a greater interval than 30 days" between two series of treatments.

In adding 8 cases to the 7 cases of reinfection already reported from his clinic, the author considers the possibility that the new treatment has made superinfection easier, and that these cases may be such superinfections, recurrent chancres, secondary or tertiary lesions. He also recognizes the difficulty occasionally experienced in differentiating soft ulcer in the region of the corona glandis.

He believes that superinfection in the secondary stage is possible, but that the lesion then takes the form of a secondary and no new generalization follows. Superinfection in the tertiary stage can sometimes lead to a new generalization of the virus, but this is a rare exception to the rule that such lesions remain local.

He expresses his admiration for the work of Neisser on syphilis in animals and the human being, and especially his observations of the signs of the production of natural immunity during the treatment with mercury.

He mentions the results of Schereschewsky's inoculations of animals with cultures of *Spirochæta pallida*. Those inoculated with living cultures were very susceptible to human virus 13 days later, while those inoculated with dead cultures were immune to human virus. The sudden killing of myriads of spirochæta in the body by treatment acts like the dead culture, setting free toxins which cause the formation of antibodies. These act to prevent generalization of the virus, and this localization is really the reason for the tertiary lesions. They are really signs of immunity.

When, however, a moderate salvarsan treatment has interrupted the dispersion of the infection and the production of immunity, the foci that remain are in no way prevented from vigorous growth with a consequent generalization. Thus he explains the mono-recidives. There are two possibilities in the development of a second infection. Either the immune bodies are able to prevent generalization and the new infection causes a tertiary lesion, or they are too weak and a chancre develops and is followed by secondaries.

He considers a hastening of the tertiary stage by modern treatment a possibility and is interested to find out whether the remainder of a first infection can materially change the soil so as to cause, earlier in the second infection, the signs of immunity.

FURTHER STATISTICAL AND CLINICAL OBSERVATIONS IN THE SALVARSAN THERAPY OF SYPHILIS. F. BERGER, p. 2394.

The author reported in No. 15, 1912, of this Journal his results from the combined mercury and salvarsan treatment during the year 1910-1911. The very satisfactory results then reported have not been equalled since then, as his dosage of salvarsan has been somewhat smaller since a death from salvarsan occurred in his practice. But the milder dosage has given very satisfactory results. By a résumé of his cases he finds that of primary cases 100% have remained free from clinical and serological symptoms. Of the secondary cases, 97.2% have remained clinically free and 60% have negative blood tests.

In spite of his good results from a single series of combined treatment, he

insists on the necessity of an intermittent treatment for the first 5 years, to avoid the surprises that the next decade may possibly have for those who neglect this precaution. If the Wassermann reaction is repeatedly negative, especially after the Gennerich provocative salvarsan injection, he allows his patients to continue with mercury alone. If the Wassermann changes to positive, he returns to combined treatment. He explains to his patients that the continued treatment with mercury is only an extra precaution against recurrences, and thus warns them against too great reliance on salvarsan without destroying their faith in its value. "Our patients should respect syphilis and its chronicity; but I hold it for a medical and human duty to guard them from syphilophobia if our most scientific care can do so."

The fact that in his several hundred cases treated with salvarsan he has not had a single real neuro-recidive he ascribes to the combination with mercury inoculations. He values them more than the injections of insoluble salts because the dosage is more easily controlled and one can be sure that the effect will not be delayed until some future time.

He has previously mentioned the peculiar pricking or burning sensations or feeling of tenseness in the gums or sour or bitter taste experienced by some patients during the injection of salvarsan. He considers this the first sign of a susceptibility to arsenic, and a valuable warning not to be disregarded. When this symptom appears he at once stops the injection and believes that he has thus saved the life of one patient, who, a full year after his two first injections, complained during the third injection of a bitter taste, when he had received only 0.1 of salvarsan. No more was given, and the patient had a moderate reaction lasting six days. The author feels sure that there would have been a dangerous reaction had more been given.

He closes with praise of salvarsan as an indispensable part of the treatment of lues, especially in the abortive treatment, in combination with mercury.

(*Ibidem*, November 4, 1913, lx, No. 14.)

THE OCCURRENCE OF SPIROCHÆTÆ PALLIDÆ IN EARLY AND LATE SYPHILITIC DISEASE OF THE CENTRAL NERVOUS SYSTEM. MAX VENSE, p. 2446.

Since the epochal revelation of Noguchi of spirochætæ in the brains of paretics and the spinal cords of tabetics, the author has resumed the search for spirochætæ in the central nervous system of these cases. He gave up his previous search because of negative results. With the Levaditi stain he was again unsuccessful except in one of five cases of progressive paralysis. This case died of sepsis from a carbuncle. The spirochætæ were found in the glia network, but one was found near a blood vessel.

In three cases of tabo-paralysis he had negative results. In two cases of pure tabes he found short, sharply spiral bodies which he believes are spirochætæ, but of which he cannot be positive because he could not find any typical long forms. One of these short forms is in the ganglion cell.

He mentions these somewhat doubtful cases only because, so far, no one has substantiated the findings of Noguchi in tabes. In the nerve roots and spinal ganglia no one has found the organism, yet the author calls attention to his previous work on syphilitic cerebro-spinal phlebitis, in which he found *Spirochætæ pallidæ* very numerous in the spinal nerves up to the ganglia, with consequent interstitial neuritis, without there having been clinically any spinal symptoms.

He recommends the French method of searching for spirochætæ with the dark field condensor in the expressed juice of the fresh specimen, as an indicator for the more exact localization by the Levaditi method. The searcher can thus save himself much unnecessary and wearisome labor.

THE PHYSICAL AND BIOLOGICAL FOUNDATION OF THE ACTION OF RADIO-ACTIVE BODIES, ESPECIALLY MESOTHORIUM, AND ITS SUBSTITUTION BY ROENTGEN RAYS. C. MUELLER, p. 2448.

Those who have watched for years the action of Roentgen rays on malignant tumors are not astonished at the effects obtained with mesothorium. These effects only substantiate what has been already established in the case of Roentgen rays, the ability of the rays to destroy by elective action the tumor cells.

The fact that such great success has been recently attained with mesothorium is due to the facility of placing it in gynecological tumor cases and to the favorable mixture of rays. Of these rays, all are filtered out except gamma rays, and these are like Roentgen rays except that they are more penetrating. This fact, however, does not explain why they are more active therapeutically. In fact, only the rays that are absorbed by the tissues can affect them and according to this law, the more penetrating mesothorium rays are less effective than Roentgen rays. Either the law of absorption is incorrect or it is not the gamma rays that effect the biological action. The latter supposition is the correct one. The effective rays are secondary rays of especially great penetration, caused by the capsule of heavy metal in which the mesothorium is enclosed. These rays penetrate animal tissues to the depth of 7 cm., and it is just to this distance that therapeutic action is attained.

The production of these penetrating secondary rays was only a lucky coincidence, for the filter was intended to cut out the alpha and beta primary rays.

Various theories have been formulated to explain the action of Roentgen rays on tumor tissues. They are supposed to cause chemical changes in the cells and destroy certain substances such as lecithin, or to disturb the ferment activity of the cell, or to electrify the atoms and so ionize them. In regard to the last theory, we know that alpha rays have an ionizing power of 10,000 units, beta rays of 100 units, and gamma rays of only 1 unit. It is plain, then, that beta rays are much more active than gamma rays. A study of this question by the author and F. James which is now being published, supports the correctness of this theory in regard to deep Roentgen therapy in the abdomen.

The way to the successful substitution of mesothorium by Roentgen rays is clear. Very hard, well filtered rays must be used and at the spot where the action is especially desired, a filter of a certain thickness of heavy metal must be placed. In this way we have a means of producing locally secondary beta rays where their action is desired. The author has already achieved in this way a series of results which are secondary in no way to those attained by mesothorium.

CONCERNING THE CAUSE OF TYPHUS. M. RABINOWITSCH, p. 2451.

The author adds to the description of his *Diplobacillus exanthematicus* some details of morphology, staining and cultural characteristics and inoculation results.

In fresh cultures it is always a gram positive diplobacillus. Only as the cultures get old do they show degeneration forms and gradually become gram negative. He has often obtained from the blood of typhus patients a culture in which his bacillus was mixed with a coccus, but considers the coccus a secondary infection.

The diplobacillus does not change the color of colored culture media, ferment sugar or coagulated milk.

Cultures were always obtained from the blood shortly before the crisis, and in three instances, soon after the crisis. The best culture medium is equal parts of ascites fluid and bouillon with 4% glycerin; 100 cc. of this must be inoculated with 3.0 to 5.0 cc. of blood.

The virulence, tested on guinea pigs, varies from nothing through all grades

to very high. The incubation stage in these animals varies according to the virulence of the culture from 5 to 37 days.

The organism can be recovered from the heart blood of inoculated animals at the crisis whether they have been inoculated with patient's blood or pure cultures of the diplobacillus.

Agglutination is not constant, varying with virulent cultures from dilutions of 1 to 60 to 1 to 640.

The Bordet-Gengou reaction is fairly constant, at or near the crisis. In 80% of 25 cases he got complete complement deviation with two virulent cultures as antigens. Guinea pigs successfully inoculated with blood or cultures were thereafter immune to further inoculation.

FURTHER CONTRIBUTIONS TO SYPHILITIC REINFECTION AFTER SALVARSAN TREATMENT AND TO THE BIOLOGY OF HUMAN SYPHILIS. GENNERICH, p. 2460.

In continuation of his article begun in the previous number of the *Muenchener Medizinische Wochenschrift*, p. 2391, he lays down the requisites to the recognition of a second infection with syphilis.

First, the first infection must have been undoubted.

Second, it must have entirely cleared up under thorough treatment, so that no traces are left clinically, serologically or in the spinal fluid, before the second infection takes place. In discovering latent cases he places great faith in the provocative injection of salvarsan. He cannot believe that foci of infection can escape discovery by one or the other of our present diagnostic methods.

Third, the reinfection must correspond in all points to a fresh infection. It must show a typical primary lesion containing *Spirochætæ pallidæ*, indurated dorsal lymph vessel and regional glands, positive Wassermann reaction in the usual time, secondary symptoms in the usual time, and normal spinal fluid, or only such changes as correspond to an early infection.

He tabulates his 15 cases of reinfection and gives special reports on the last 8, which are here reported for the first time. Of these 8 cases, 7 gave fully normal findings in the spinal fluid, which he considers a strong argument that the first infection was fully healed, as the meningeal infection is the commonest focus to remain hidden for years.

The paper is difficult to reduce to the narrow limitations of a review. (To those who have a firm belief in the ability of syphilis to awaken after a long dormant period, it is remarkable that only two of the supposed reinfections occurred more than 18 months after the end of a short course of intensive treatment. Reviewer.)

(*Ibidem*, Nov. 11, 1913, lx, No. 45.)

CONCERNING LYMPHOBLASTIC (LARGE-CELLED LYMPHATIC) AND MYELOBLASTIC LEUKÆMIA. G. HERXHEIMER, p. 2506.

The author discusses the lack of unanimity in regard to the classification of the various types of leukæmia and shows that with the help of the oxydase reaction the differentiation is much more clearly made than formerly. By this means the large mononuclear forms can be divided between the lymphatic and myelogenic groups. He cannot agree that Sternberg's leuko-sarcomatosis is an independent entity. He credits Sternberg, however, with pointing out the frequency with which the large mononuclear forms tend to tumor formation. That this is most often seen in the lymphoblastic forms he agrees, but is also certain that some of these cases belong to the myeloblastic group.

To decide the acute or chronic character of the case, he holds with Fraenkel that only those cases are acute which begin suddenly and from the first show symptoms that appear only at a much later period of chronic leukæmia. The idea

that most of the acute cases are myelogenous is contradicted by recent reports of acute lymphatic cases. The increase of eosinophiles and mast cells, given by Ehrlich as one of the characteristics of leukæmia, is often wanting in the acute cases, and on the other hand, mitotic figures are often seen in the blood cells of the acute form.

He reports an acute lymphoblastic leukæmia in a five year old child, who had a throat lesion treated for diphtheria and improved by the antitoxin. At this time the swellings about the jaw and neck were noticeable. These increased in size, anæmia and weakness grew steadily worse, and 6 weeks after the onset, the child came into the hospital with a marked general enlargement of lymph glands, large liver and spleen, a general petechial eruption and a walnut sized tumor of the scalp. The blood contained only 11% hæmoglobin, 960,000 red cells and 56,000 white cells, of which a large percentage were large mononuclears, non-granular and giving a negative oxydase reaction. Post mortem, these same cells were found filling the spleen and bone marrow, the lymph-gland and skin tumors.

(*Ibidem*, Nov. 18, 1913, lx, No. 46.)

EXPERIMENTALLY PRODUCED DEPOSITS OF CHOLESTERIN-ESTERS AND GROUPING OF XANTHOMA CELLS IN THE SUBCUTANEOUS CONNECTIVE TISSUE OF THE RABBIT. N. ANITSCHKOW, p. 2555.

While many observations are recorded of fat inclusions in certain of the cells of inflammatory processes, no systematic study of their nature or method of occurrence has yet been made. It is known that these occurrences are especially numerous about pus cavities, and that the large phagocytes present have a finely vacuolated protoplasm. Aschoff, Windaus and others have shown that the doubly refractive lipid contained in the protoplasm of many of these macrophages is a cholesterin resulting, as Aschoff explains, from local tissue destruction. These appearances are easily produced experimentally in animals. Maximow has shown that such cells are common among the pus phagocytes. They are morphologically pseudo-xanthoma cells. The author undertakes to show that they contain cholesterin and thus complete their relation with the similar cells in the human being.

He first caused pus foci by introducing into the subcutaneous tissue of rabbits foreign bodies soaked with turpentine or infected with staphylococci. At the height of the suppuration he found pseudo-xanthoma cells containing doubly refractive particles of cholesterin. In the first stages of inflammation or in the resulting scar such cells were never seen. The reaction to sterile foreign bodies in the connective tissues of rabbits never produced these cells.

To produce a parallel to the generalized pseudo-xanthoma (or xanthelasma of Aschoff and Kammer) he fed rabbits on a cholesterin rich diet and found regularly in the vicinity of the sterile foreign bodies, collections of pseudo-xanthoma cells which did not, as in the former experiments, disappear in a few days, but grew larger and showed a tendency to arrange themselves in rows and groups. On other irritated areas also, as in stitch wounds and amputation stumps, these cells were plentiful, and in rabbits long fed on a cholesterin diet, they were found in the connective tissues in many places where no special irritation had been present. By the introduction of foreign bodies into the myocardium, collections of the cells were determined there and by chemical cauterization of the cortex of the kidney, infiltrations were localized there. In rabbits fed with cholesterin for a long time, the xanthelasma cells were found wherever macrophages are normally present, aside from irritation. The Kupffer liver cells and the interstitial cells of spleen and bone marrow, cells which are closely related to the macrophages of the connective tissue, took up cholesterin and enlarged to typical xanthelasma cells. Of great interest also were the collections of these cells in the walls of

the aorta and the mitral valve, possibly localized there by the special and constant irritation under which these parts labor.

The author considers that the parallel between human symptomatic xanthoma or xanthelasma and his experimental xanthelasma is very close, and hopes that light has been shed on the pathogenesis of these conditions and of aortic plaques.

LYMPHOBLASTIC (LARGE-CELLED LYMPHATIC) LEUKÆMIA AND MYELOBLASTIC LEUKÆMIA (*continued*). G. HERXHEIMER, p. 2573.

In continuation of his article begun in No. 45 of this volume, p. 2506, the author reports the three cases of myeloblastic leukæmia which he has had a chance to study and to post in the past year. The first was a man known for years to have had a polycythæmia with large spleen without any abnormality in the leucocytes. Suddenly he grew worse and his blood showed an increase of the white cells with a large percentage of large mononuclear non-granular cells giving a positive oxydase reaction, and basophilic to methyl green pyronin. He died of this acute leukæmia in a few weeks.

The second case was a woman of 62 who presented the clinical picture of typhoid and on section, ulcers typical of typhoid were found in the intestine, yet cultures showed that it was a colon bacillus infection secondary to myeloblastic leukæmia. The author remarks the frequency of infections of the mouth and alimentary tract in leukæmia and the temptation to give them ætiologic value, while they are in fact only secondary infections.

The third case was a youth of 16 who had a chronic leukæmia with acute exacerbation before death. The blood showed 70% of small and medium sized lymphocytes and 25% of large smooth mononuclears. They appeared to be all related, grading from small to large. But the oxydase reaction showed that the large cells were not related and that the case was one of myeloblastic leukæmia, grafted on a previous chronic lymphoblastic form. These cases are very rare, but speak strongly for the dualistic origin of the two forms of leukæmia.

JAHRBUCH FÜR KINDERHEILKUNDE.

(Aug. 1, 1913, xxviii, No. 2.)

Abstracted by HARVEY PARKER TOWLE, M.D.

THE QUESTION OF INFLAMMATORY CHANGES IN THE ORGANS IN CONGENITAL SYPHILIS. F. HAERLE, p. 125.

The writer maintains that syphilis is capable of producing not only a chronic inflammation characterized by tissue increase, but also, even in the same case, an acute, exudative inflammation. To support her argument, Dr. Haerle gives short summaries of the articles published since 1869 to show that thymus abscesses and acute exudative inflammations of the umbilical cord are frequent occurrences in congenital syphilis.

A detailed description follows of an autopsy of a child who lived but ten minutes after birth. The mother's history and the Wassermann reaction were positive, but the child presented no visible signs of syphilis. Nevertheless, the demonstration at the autopsy, of abundant spirochætæ in nearly every organ and fluid of the body, placed the diagnosis of congenital syphilis beyond all doubt.

Especially interesting was the fact that, under the microscope, abscess formations were found in all parts of the body. Seemingly, they were typical of an acute inflammatory infectious process, yet bacteriological examination failed to discover a single organism except the spirochætæ pallida.

THE EXCRETION OF URIC ACID BY EXUDATIVE CHILDREN AND THE INFLUENCE OF ATOPHAN UPON IT. HANS KERN, p. 141.

Uffenheimer studied the daily uric acid secretion of children between three and thirteen years old by means of Folin-Schaffer's modification of Hopkins' method. The results were negative in "arthritis," but in "lymphatism" the impression was received that certain constitutional disturbances which suggested arthritis, but which, in the strict sense, were not arthritis, resembled gout in the process of uric acid excretion. Kern undertook to carry Uffenheimer's experiments further along, and also to demonstrate the influence of atophan upon the excretion of uric acid.

For experimentation, Kern used infants and older children admitted for eczema of the body and face. As controls, he selected infants and older children admitted for other affections, and in whom there existed no suspicion of an exudative process. Omitting details, it may be said that Kern followed the conditions laid down by Uffenheimer, the most essential of which was a fore-period of six days of purin free diet preceding the administration of sodium nuclein and atophan, singly or in combination.

He concluded that, in contrast to the controls, a purin diet hindered the elimination of uric acid in the cases of exudative diathesis. The symptoms, indeed, were so similar to the condition of delayed excretion in gout that it was hardly possible to differentiate the two processes. Although it would have been advantageous to have made a simultaneous search for evidences of uric acid in the blood, the attempt was abandoned at the outset of his experiments because external conditions rendered it impossible to secure a sufficient amount of blood to furnish results of any value. So far as his personal observations went, the suspicion existed that there is a connection not only between gout and arthritis, in its narrowest sense, but also between gout and conditions of exudative diathesis and a uric acid arthritis.

In view of the position which atophan has won in the general treatment of gout, and in view of the influence upon the uric acid secretion shown by the urinalyses in his own cases, Kern expects some day to see atophan used as a diagnostic measure in exudative affections.

THE RELATION OF INFANTILE ECZEMA TO THE THEORY OF THE DIATHESIS OF CHILDHOOD. A. SCHKARIN, p. 156.

The dermatologist will be especially interested in the unusual point of view from which Prof. Schkarin discusses the ætiology of infantile eczema. We cannot possibly explain the manifestations of the disease, he writes, on pure pathologico-anatomical grounds. A more satisfactory theory is needed. To find it we are forced to adopt the older hypothesis of a "diathesis," with the difference, however, that in accordance with the more modern research methods of investigation we define the condition as an anomalous constitutional process which, in one direction or another, affects the organism's power of resistance.

Czerny, the writer states, speaks of an "exudative diathesis," and Paltauf and Escherich of a "status thymico-lymphaticus." Frenchmen, he says, refer to eczema as a symptom of "arthritis" and English authors of "lithæmia." Feer calls it a "dyscrasia."

Prof. Schkarin says the clinic teaches us that there are two varieties of infantile eczema. The one is obstinate, yielding neither to dietetic nor to local measures. The other clears up rapidly under appropriate dietetic measures, regardless of local treatment. According to his experience, the first, the obstinate type, is usually encountered in patients presenting marked symptoms of disturbances in the nervous system. As the nervous system steadies with increasing age, the eczematous symptoms abate and eventually disappear. Until age comes to the rescue, modifications of diet, even Finkelstein's eczema-soup, and external

applications, are equally powerless. Clinical experience has proved to him that the relationship between the course of the eczema, the methods of nourishment and the gain in weight is so multiform and complex that it is scarcely possible to include all cases under one scheme. Some respond to one method, some to another, some to none.

It is worthy of note that the cases of obstinate eczema in which the symptoms of increased nervous irritability are associated with exudative manifestations frequently present signs of spasmophilia, of laryngo-spasm and of increased electrical reaction to the galvanic current. In such cases, the only successful method of treatment is by measures directed either toward the relief of the hyper-irritability of the nervous system or toward the calcium metabolism. Schkarin recommends a combination of the two methods in the administration of bromide of calcium.

RAYNAUD'S DISEASE AS A SYMPTOM OF HEREDITARY SYPHILIS.

A. BOSÁNYI, p. 177.

Although the coexistence of Raynaud's disease and of syphilis has occasionally been reported, convincing demonstrations of its development out of a syphilitic process have been exceedingly rare. Bosányi reports two cases of congenital syphilis in which the second affection appeared before his very eyes.

In Case I, the only symptom of syphilis was a positive Wassermann. Following the intramuscular injection of salvarsan, the symptoms of Raynaud's disease disappeared, and the Wassermann reaction as well. Six months later both recurred, to again disappear after salvarsan.

In Case II the two diseases ran parallel courses. Both disappeared after salvarsan, and did not relapse.

(*Ibidem*, July, 1913, xxviii, Supplement.)

DOES THERE EXIST A FAMILIAL PREDISPOSITION TO SCARLET FEVER AND ITS COMPLICATIONS? ALFRED MATHIES, p. 116.

Mathies proposes four questions. After a very interesting discussion, pro and con, he answers them as follows: A familial predisposition to scarlet fever does not exist; the course of the disease is not necessarily the same in the individual members of one family; the complications of scarlet fever can be divided into two classes on the basis of their ætiology; lymphadenitis and otitis media are the result of the direct invasion of streptococci through the lymph channels of the Eustachian tube from a streptococcal infection of the pharynx; fever without apparent cause, arthritic symptoms, cardiac affections and nephritis are due to the toxins of the primary scarlatinal agent; streptococcal complications frequently occur in family groups, but not because of any special family predisposition; there is a familial predisposition to toxic complications which often manifests itself by a nephritis; a familial predisposition to relapses, both in the fully developed form and in the rudimentary form of angina, must be conceded.

THE RELATIONSHIP OF ALIMENTARY INTOXICATIONS TO THE SYMPATHETIC NERVOUS SYSTEM. HANNA HIRSCHFELD, p. 197.

This article does not deal directly with a dermatological subject, yet it is of importance because of the ætiological rôle which dermatologists assign to alimentary disturbances and affections of the sympathetic nervous system in the production of various diseases of the skin.

The author's argument runs somewhat in this fashion. Finkelstein has established the independence of alimentary intoxication. It has been demonstrated

that its symptoms are referable to an exaggerated irritability of the sympathetic nervous system. In instillations of adrenalin into the eye we have a pharmacological test of the state of the sympathetic nerves. With Dr. L. Hirschfeld, the author had previously succeeded in demonstrating that in the shock and in the toxæmia of the anaphylactic state, the plasma and serum of the blood had a constricting action upon the blood vessels, and also that in hypersusceptible animals destruction of albumen took place with disturbances of metabolism and increase of the antitryptic index. They surmised, further, that this destruction of cell-albumen was concerned in the rise of temperature. As it has been demonstrated that a similar rise in temperature follows injections of adrenalin, the suspicion is justified that the various phenomena related are due to the sympathetic nerves. Hence, the writer assumed that in alimentary intoxication, a disease of late infancy and of disturbed metabolic processes, pharmacological and serological test ought to reveal the existence of a heightened sympathetic tonus.

A total of 265 cases comprising a variety of diseases, was examined. Among them were 20 cases of alimentary intoxication, all of which gave a positive response to the adrenalin test of the eye; 10 cases were examined by the serum test; 6 gave an exaggerated reaction; 3 a moderate reaction, and 1 no reaction. The controls were all negative.

An alimentary origin was ruled out by the negative adrenalin tests, in one case of colicæpsis and in one of cystitis, both of which presented the symptoms of an intoxication. Among the positive cases was one of exudative diathesis, during an outbreak of urticaria, and one of cow's milk exanthem.

As a whole, the adrenalin reaction was found the more constant. No case reacted positively to the antiferment test which did not also respond positively to adrenalin, but some cases were encountered in which the serum test was negative, although the adrenalin test positive.

ANNALES DE DERMATOLOGIE ET DE SYPHILIGRAPHIE.

(February, 1914, No. 2.)

Abstracted by PAUL E. BECHET, M.D.

THE TREATMENT OF CUTANEOUS TUBERCULOSIS AND TUBERCULIDES WITH NEOSALVARSAN. ARNAULT TZANCK and E. PELBOIS, p. 65.

Tzanck and Pelbois were led to use neosalvarsan in cutaneous tuberculosis and the tuberculides by the good results attained by Ravaut. They used the method in 9 cases of lupus, 2 ulcers, 3 cases of suppurative adenitis, 2 of lichen scrofulosorum, 2 papulo-necrotic tuberculides, 1 erythema induratum of Bazin, 2 lupus erythematosus, 1 sarcoid of Boeck, 1 sarcoid of Darier-Roussy. The Wassermann reaction in all these cases proved negative, with the exception of two, in which it was positive, and three cases in which it was not done. The neosalvarsan is given in concentrated solution, according to the method of Ravaut, at an interval of 8 days, in a series of 4 injections of 0.45, 0.60, 0.75, 0.90 grams, and is followed by a second series if necessary. The cases of lupus were also treated with the X-rays and scarification, but the results attained with these means were materially greater after the injection of neosalvarsan. Adenitis was particularly amenable to the injections, two of the cases clearing up entirely. In the tuberculides results were at variance, some of the cases clearing up rapidly, others very slowly. They warmly advocate the concomitant use of local treatment.

NEOSALVARSAN, ITS USE IN THE DERMATOLOGICAL CLINIC IN BORDEAUX (1913). MM. MORIN and JOULIA, p. 89.

Morin and Joulia have administered 159 grams of neosalvarsan in approximately 100 cases of syphilis. The method used was that of Ravaut, even the largest doses were given in only 15 to 18 cubic centimetres of distilled water. A total of 192 injections was made, with no local accidents, such as phlebitis, etc. There were no deaths. Grave accidents were excessively rare, but slight reactions such as fever, nausea and severe headaches were rather frequent; they apparently did not depend on the size or frequency of the dose, but rather on antecedent mercurial treatment; the reactions were much more frequent in those cases who received neosalvarsan without preceding mercurial therapy; those patients who had been treated with mercury prior to the injections of neosalvarsan gave a much smaller proportion of reactions. They were particularly impressed with the action of neosalvarsan in conjunction with mercury in three pregnant women with secondary syphilis; the three women gave birth at the normal time to three perfectly healthy children, who were still well when seen a month later. They conclude that mercury should invariably precede neosalvarsan therapy; it greatly attenuates Herxheimer's reaction, and that accidents from neosalvarsan would be extremely infrequent if previous active mercurial medication was administered.

GAZETTE MEDICALE DE PARIS.

(Feb. 11, 1914, xiv, No. 236.)

Abstracted by PAUL E. BECHET, M.D.

ERYTHEMA NODOSUM, A SEPTICÆMIA FROM KOCH'S BACILLUS. LANDOUZY, p. 37.

Landouzy believes that the majority of cases of erythema nodosum are caused by a septicæmia resulting from the invasion of the organism by the tubercle bacillus. He has frequently observed pulmonary, cardio-vascular or articular tuberculosis, either preceding, accompanying, or following erythema nodosum. He reports a case of this dermatosis in a woman aged 27, in whom also existed arthralgias and early apical tuberculosis of the right lung. A tubercle bacillus was found in one of the nodules, and a guinea pig inoculated with a part of the same nodule developed a typical tuberculosis at the point of inoculation, and in the liver and lungs.

REVISTA CLINICA DE MADRID.

(Apr. 15, 1914, vi, No. 7.)

Abstracted by A. RAVOGLI, M.D.

THE REACTION OF ABDERHALDEN IN THE CLINIC. J. MOURIZ REISGO, p. 241.

The author calls attention to the fact that the serum of animals into which foreign substances have been injected, either subcutaneously, intraperitoneally, or intravenously, acquires the property to decompose them and to reduce them to the molecular aggregation of its own organism. Weinland observed this phenomenon in dogs into which for some time saccharose had been injected, and their serum was capable to decompose it in vitro by decomposing it into glucose and levulose.

Abderhalden confirmed the observation by injecting lactose and polysaccharins in order to study the rôle of the animal organism for the albuminoids. He found that as soon as the organism receives albuminoids of different origin from those composing its plasma, it defends itself against them, forms ferments which secure physical and chemical uniformity, to restore the ordinary development of its metabolic process.

But not the albuminoids alone are capable of disturbing this equilibrium, but also those belonging to the same organism which have suffered some modification in their chemical constitution, making them different from those of the blood. Starting from the principle that the cells of each organ are constituted by albuminoids with a determined quantity of amino-acids, and grouped together in a special manner, Abderhalden thought that, when any organ suffers pathological alterations, the chemical composition of its albuminoids must undergo modification. In order to make these products suitable to the composition of the blood, ferments must be produced to disintegrate them and render them inoffensive to the organism. The specificity of the proteolytic ferments, their exclusive action on albuminoids proceeding from diseased organs, and their absolute indifference to the normal ones, has not yet been demonstrated, on account of the difficulty to recognize the complex constitution of the albuminoid molecule.

He refers to the origin of the ferments which, in the beginning, Abderhalden supposed to be in the leucocytes; but now it has been proved that their origin is from the same organs in which the ferments are formed, and their presence in the blood is due to the fact that from those organs they have passed into the circulation.

Abderhalden has given two methods to recognize presence of ferments, the optic and the dialysis.

The optic method is founded on the alteration of the polarization, which is caused by the action of the ferments of the serum on the peptones of the albuminoids. Dialysis is usually applied in clinical work, and is based on the fact that the colloid albuminoid mixtures do not go through normal animal membranes, while their products from decomposed peptones pass easily.

The author speaks of the apparatus and of its accuracy in order to obtain correct results. He selects the dialyzators which had entirely prevented the passing of the albuminoids, and after washing, he keeps them for the production of albuminoids. The author warns not to use the dialyzators sent by the factory unless they have been tried by the operator. It is necessary to take at least 20 cc. of blood in order to obtain enough serum. The blood must contain the least possible blood corpuscles, must be aseptic, and contain few substances which react to ninhydrin. By means of the centrifuge the blood corpuscles are removed; the hæmoglobin cannot be taken out so easily; for this he recommends the method of Bronstein, to cover the tube with paraffin.

The difficulty is to obtain the serum from the organs from which the ferment has been originated. It is necessary to take the different organs, have them washed and cut into small pieces, and to remove the cellular tissue as much as possible. If tumors are present they must be removed to separate the pathological from the normal tissues. One part is used and the serum from patients in whom the same organ is affected will show the reaction. Some errors, like that of Abderhalden in a patient with gastric ulcer which showed carcinoma of the stomach, was due to the tumor containing normal tissue.

The parts of the organs must be free from substances which react to ninhydrin. This is ascertained by taking a piece of the organ with five times its volume of water and heating it for five minutes; then the liquid is filtered and boiled again for one minute with 1 cc. of ninhydrin, 1 per cent. solution. If the contents of the tube, after a half hour, do not show a violet reaction, the organ can be used. The organs are preserved in large mouthed jars in distilled water and chloroform and underneath a layer of toluol.

The limits of the reaction are not sharply defined; when the proportion of amino-acids is above 1, the reaction is positive; when below 1, it is negative.

Starting with the idea that every serum contains products, which react with ninhydrin, and that any preparation of organs must be free from them to obtain the desired result, every organ must be tested to make sure of the absence of amino-acids. The evaporation also has to be carefully watched.

It seems that in infectious diseases the method has not given good results, but Abderhalden looks upon all the failures as due to faulty technique. He tries to eliminate the dialyzator and uses a simple test tube. As the foundation of his method is the separation of the albuminoids from the products of decomposition, he is using the system of ultrafiltration, coagulation by heat and subsequent filtration.

AMERICAN JOURNAL OF DISEASES OF CHILDREN.

(January, 1914, vii, No. 1.)

Abstracted by HARVEY PARKER TOWLE, M.D.

A CONSIDERATION OF TARDY SYPHILIS. H. H. YERRINGTON and FLORENCE M. HOLSCLOW, p. 32.

During the past two years the writers have seen more than 150 syphilitic infants, to over 70 of whom they administered salvarsan. They divide the cases into two main groups, one of undoubted syphilis and one of obscure symptoms.

The first group comprised 5 infants, all under 3 months old, all with positive clinical signs and family histories and with triple positive Wassermanns. Three received $\frac{1}{20}$ gm. of salvarsan intravenously. None survived two weeks. At first, the symptoms showed improvement, but within a few days there developed a generalized oedema with slight urinary signs which were soon followed by death. One infant with a generalized syphilitic pemphigus died within 48 hours after receiving the salvarsan. One was treated indirectly by means of the milk of its salvarsanized mother. The result is unknown as the patient disappeared from view.

More interesting in some respects than the first group of active cases with its salvarsan fatalities in the second group, composed of cases which the writers call latent or tardy syphilis. They divide the second group into two classes. In the first class are included the cases of late manifestations, of syphilis of the eyes, ears, bones, nervous system, skin, etc., with a positive or a negative Wassermann reaction, no clinical history nor clinical evidence of the disease and, in many instances, with a negative family history. The second class comprised a group of infants who simulated completely the marasmic type of infant. The histories related that, although 3 or 4 months old, the child never exceeded his birth weight. There were no clinical signs of syphilis. There might or might not be a positive family history. The Wassermann reaction might be triple + or only slightly positive.

The authors believe that there is a certain class of cases which, simulating marasmus and exhibiting no clinical signs of syphilis during early infancy, develop symptoms later in infancy or in childhood.

A year ago they reported 23 cases, varying in age from 3 to 16 years, which have since been under continuous close observation; 21 cases developed late manifestations of syphilis as follows: 12 of bilateral keratitis; 2 bone lesions; 3 atrophic rhinitis, arthritis, backward growth, Hutchinson teeth and a positive Wassermann reaction; 1 encephalitis and interstitial keratitis; 1 chorea; and 2 symptoms of early congenital disease.

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Of the 21 cases, only two showed any sort of early clinical symptoms, and then only the unreliable sign of delayed walking. In 7 there was a definite family history of syphilis.

All except 5 eye cases showed a triple + Wassermann reaction. One of the latter became positive two weeks after the third injection of salvarsan. Concerning the other 4 eye cases having a positive Wassermann reaction, the writers say, "Possibly the 4 remaining cases were *tuberculous* in origin, although no other evidences of tuberculosis could be found."

Four eye cases of recent infection cleared up under salvarsan; 4 cases of long duration and repeated attacks and 4 cases of negative reaction showed little improvement. Good results were obtained in bone lesions, both in infants and in older children. The hearing was not improved in the cases of partial deafness with bilateral keratitis. The one case of chorea showed an unusually rapid improvement after 2 injections given within 4 weeks. The Wassermann reaction remained negative after the second month. The case of encephalitis with keratitis did not improve, notwithstanding a negative Wassermann reaction after the third injection. All cases showed the tonic effect of salvarsan in a general physical improvement.

The writers believe that, in such cases as these, good results can come only from not less than 3 intravenous injections of good-sized doses, repeated at short intervals.

Over 100 cases of marasmus were kept under observation; 50 were seen every week up to the present time; 8 of the marasmic infants had a triple + Wassermann reaction. A few gave a slightly positive reaction. The only clinical symptoms which the infants in this group showed was insufficient nourishment and a failure to gain weight under a rational food formula.

The patients having positive reactions received from $\frac{1}{20}$ to $\frac{1}{10}$ gm. salvarsan intravenously under mild chloroform-ether anæsthesia. Without exception, the injected child within 6 weeks, and usually sooner, showed a gain in weight and a negative Wassermann. Two infants with a triple + Wassermann reaction, and not receiving treatment, gained slowly and, 6 months later, still had positive reactions.

With mercurial inunctions the gain in weight and the negative Wassermann reaction were obtained less rapidly.

From their data the writers conclude that many so-called cases of marasmus are due to lues and that only early discovery and careful treatment will avert future disaster.

(*Ibidem*, January, 1914, vii, No. 4.)

DISSEMINATED MILIARY TUBERCULOSIS OF LUNGS AND SKIN.

W. P. NORTHRUP, p. 24.

Dr. Northrup reports 8 cases presenting a mental picture of pneumonia and physical signs of bronchitis in which the diagnosis of general miliary tuberculosis was determined by means of X-ray examinations, plus, in 3, a peculiar skin eruption. The skin eruptions were not like the localized tuberculous lesions ordinarily described, but possessed certain characteristics which, according to the reporter, rendered them pathognomonic. Moreover, Dr. Northrup considers the occurrence of the eruption a valuable, almost conclusive point in the prognosis as, in the young child, it is "nearly always associated with a fatal form of tuberculosis."

The most characteristic feature of the eruption is its tendency to produce necrosis. In describing the individual lesions, the writer says in one place, that they are mainly necrotic, resulting in vesicles, a process to which he prefers to apply the term necrotic tuberculide, used by Pfandler and Schlossmann. In another place, it is said that "among the characteristics of the individual lesions may be mentioned the *size*, that of a rose spot in typhoid fever, topped by a tiny *vesicle*,

surrounded sooner or later by a congested or hæmorrhagic zone, with the formation of a crust, which, when removed, leaves a little pit."

In the first case, in a child $2\frac{1}{2}$ years old, the lesions were "papulo-vesicular, perhaps more vesicular from the first," which, on the neck, where they were thickly clustered, "were more like sudamina, a little larger, though not as large as the vesicle of chicken-pox." When fully developed, the lesion was about 2 mm. in diameter. The eruption made its first appearance about the mouth and on the neck and chest but eventually involved the whole body including the soles, palms and scalp, occurring in greatest abundance about the mouth, anus and buttocks. There was enlargement of the liver and of the superficial lymph nodes everywhere. Various diagnoses were made by those seeing the eruption, including syphilis and chicken-pox. The eruption in the second case was similar and is described as suggestive of chicken-pox, except that the papules were smaller. A member of the Board of Health diagnosed the eruption as a late stage of varicella, attributing the small size of the lesions to the stage of the disease. In the third patient, 15 months old, the eruption consisted of small, pin-head sized, and a little larger papules with small, necrotic centres.

A brief description of the histopathology of the disease is given in connection with the first case, which came to autopsy. Tubercles were found in all the internal organs. Clumps of tubercle bacilli were found in even casual smears of the blood in the heart. "Smears taken from the skin vesicles showed such quantities that the spread out corium was faintly pink from the stained bacilli."

Properly speaking, the process was not one of tubercle formation but was necrotic tuberculosis. There was no tissue reaction at all, merely a melting down into necrosis where the tubercle bacilli stopped and began to grow. "There were just necrotic areas filled with tubercle bacilli. In none of the zones were found evidences of protective reaction. (Dr. Lamb.)"

In the discussion, it was said that "the histology varies with the acuteness of the invasion. The above cases were of the acute type and the vesicles (necroses) were the first revealed lesion. It may be that slower developing lesions would disclose the different types described, viz., 'papulo-squamous' and 'papulo-necrotic' tuberculides described by Darier and Boeck in 1896." Dr. Northrup concludes that the lesion is probably always embolic.

(*Ibidem*, April, 1914, vii, No. 4.)

STUDIES ON THE INCUBATION PERIOD. No. 1. SERUM DISEASE. DAVID MURRAY COWIE, M.D., p. 253.

Through facts gained from study of the biochemical reactions following injections of horse serum, the original conception of the incubation period is undergoing material change. We once thought of the period as the time during which, after entrance, the invading agent gradually gathered strength to overcome the natural resistance of the body and to produce symptoms of disease. The active factor in the progress was supposed to be the antibodies carried in the body. We know now that it is the serum itself which is at fault and not the antibodies, as it has been found that the smaller the bulk of the antibody-containing serum, the less regular is the occurrence of unpleasant symptoms.

In 1903, Arthus and Pirquet and Schick, independently, called attention to the significant facts that an indefinite period of time always intervenes between the injection and the symptoms, and that the latter occur only when the patient has been previously injected at some time. They arrived, by different routes, at the same conclusion, i.e., that the primary injection had induced certain body changes which, during the interval, so sensitized the organism that it had become hypersusceptible to the foreign proteid substance of the injection. Consequently, when a later injection was given, anaphylactic reaction occurred. This condition von Pirquet and Schick called serum disease.

It was then demonstrated that there were certain factors which were to be found only in those cases which gave to a second injection the typical reaction of serum disease, i.e., individual susceptibility, quantity and a proper interval to allow sensitization to be developed. A large dose seems to produce visible symptoms, in susceptible individuals, whereas a smaller dose does not. On the other hand, animal experimentation seems to show that reinjection after a small sensitizing injection is more likely to be followed by complete anaphylactic shock (death) than after a larger primary dose. It has also been apparently shown that the larger dosage, singly or by frequent injections, produces, for an indefinite length of time, a temporary state of insusceptibility rather than an immunity, for, at some indefinite future time, the characteristic sensitiveness is found to have developed. (This fact bears upon the proper method of administering salvarsan.)

The author conducted four series of experiments. The object in his first group of cases was to determine, in as many cases as possible, how long a time elapsed between the first injection of horse serum and the first demonstrable evidence of antibodies. For the purpose, a primary prophylactic injection of diphtheria serum was made intradermally, followed by a rapid succession of intradermal injections of horse serum. Thirty cases were tested; 100% of the adult cases showed evidence of the development of a specific oversensitiveness and 94% of the children. In 19 cases, followed closely, a demonstrable reaction was observed in 18, after intervals varying from 2 to 10 days. One case was negative. Of the positive cases, 7 showed the reaction on the seventh day. With one exception, the reacting cases remained sensitive throughout the first experimental period, i.e., from 8 to 12 days, and, probably, for many days thereafter. One case was still oversensitive 167 days after the first injection, another 134 days. The size of the sensitizing dose seemed to play no part, for the first case had received the larger dose and the second an exceedingly small dose.

Series 3 demonstrated still further the unimportance of the size of the sensitizing dose, the reaction occurring after minute doses as promptly as after large. Moreover, the results of secondary inoculations at a distance seemed to indicate that the reaction was not local but systemic. In 8 cases, the first positive reaction occurred at the site of the last intradermal injection. The typical case showed a central zone of anæmia, slightly infiltrated and slightly elevated, surrounded by an outer flat zone of hyperæmia with a jagged periphery. In the positive cases, gentle rubbing of the injected area the day before signs were definitely visible, produced a blush. This phenomenon failed in the negative cases.

Cowie's second series was intended to determine the length of time oversensitization endured and the factors influencing the reaction. He found many instances in which the reaction was present a year or more after the primary injection and one case in which the interval was 7 years, the longest interval on record. Such hypersensitive states are said to denote a condition of *allergy*.

Three types of reaction are mentioned (v. Pirquet and Schick), the immediate, the hastened and the double. The immediate reaction appears within 24 hours of a reinjection, given 2 to 4 weeks after the primary injection. The hastened reaction is seen in cases in which 6 months have elapsed since the primary injection. In these cases, the reaction is less rapid than in cases with a shorter interval, being delayed several days, yet, occurring sooner than after a primary dose, the reaction is hastened. In cases showing the *double reaction*, the first symptoms appear within 24 hours of the reinjection, disappear and, after an absence of 3 or 4 days, reappear.

The immediate intradermal reaction is the rule in individuals who have passed the stage of pre-allergy (4 to 10 days). The intradermal reaction seems to differ from true serum sickness only in the fact that it always occurs regardless of the age or the state of allergy and that the symptoms differ in degree.

The third series of experiments was to determine whether minute doses of horse serum were capable of sensitizing and for how long the condition, when pro-

duced, would endure. The results indicated that, in children, typical oversensitiveness could be recognized after a dose of 1 cubic milligram of horse serum and that the condition might persist, apparently, indefinitely. Its presence was demonstrated in one case after 136 days.

Assuming that, if horse serum is actually present, a highly sensitized child will react to serum from a child recently injected for the first time, Cowie undertook to determine, by a fourth series of experiments, whether horse serum existed as such in the circulation and for how long. The conditions, therefore, complied with the hypothetical requirement of v. Pirquet and Schick, that the injected substance should contain the allergin and ergin necessary to the production of the positive reaction. The results indicated that horse serum did exist as such in the circulation and persisted for several days.

From his experiments, Cowie thinks that further, more exhaustive investigations may demonstrate that many phenomena of the exanthemata may be explained by the existence of a state of allergy.

Cowie concludes that his studies show the incubation period of serum disease to be divided into three distinct stages, the pre-allergic, the allergic and the hyper-allergic.

The pre-allergic stage follows the injection of the *allergin* (the serum) and continues until visible symptoms appear, the period during which the reactivity of the organism is undergoing change. For a variable number of hours or days, according to the variety of allergin, *ergin* is elaborated in progressively larger amounts (the stage of allergy) until finally the quantity present is sufficient to overcome the resistance of the organism and to produce the characteristic symptoms of serum disease (the state of hyper-allergy). "Ergin has now reached its highest point. Hereafter, depending upon the degree of allergy or hyper-allergy, the individual, if given an injection of allergin, no longer passes through a pre-allergic stage but either passes directly into hyperallergy (immediate reaction) or hastening through the allergic stage, reacts with characteristic symptoms, 3 or 4 days ahead of a primary injection case."

ARCHIVES OF PEDIATRICS.

(February, 1914, xxi, No. 2.)

Abstracted by HARVEY PARKER TOWLE, M.D.

A STUDY OF THE CHILD IN THE TUBERCULOUS MILIEU. MAURICE FISHBURG, p. 96.

Tuberculin infections are not limited to the internal organs. They also occur in the skin. Therefore, because of its bearing upon cutaneous tuberculosis, Fishberg's extensive study of the ætiological relationship of environment to the production of tuberculous disease is of as great interest to the dermatologist as to the pediatricist.

Recognizing the aptness of the reproach that the usual estimates of the prevalence of tuberculosis are based upon the results of tuberculin tests upon sick patients in hospitals and dispensaries, Fishberg avoids similar criticism by adopting a new method of approach. Instead of starting with the child in the hospital, he begins with the tuberculous parents and works backward to extra-hospital conditions. During March, April and May, 1913, the social, economic and hygienic conditions of the family of every tuberculous adult applying to the United Hebrew Charities of New York City were immediately investigated and every child under 15 was subjected to a medical examination and a cutaneous tuberculin test. Whenever the first result was negative, a second von Pirquet test was made, 4 months later.

Fishberg studied first the social and economic conditions of the family. With-

out actually expressing his personal opinion, he quotes Schlossmann's statement that the existence of an "open" tuberculous case in the household of a poor man is equivalent to a diagnosis of tuberculosis in the children.

Comparing the various methods of infant feeding on the basis of prophylactic efficiency, Fishberg concludes that, "on the whole, it seems that for the child, as long as it remains in the tuberculous milieu, it is immaterial whether it is breast-fed or artificially fed. It is bound to become infected, either way."

Loss of weight is usually considered corroborative evidence of tuberculosis. Fishberg questions whether the "social misery" of the poor may not be an equally valid explanation. The flat chest upon which French writers place so much importance as an index of the habitus phthisicus, according to Fishberg, is an effect of tuberculosis and not a cause. His observations tended to show that the flat, long chest has nothing to do with tuberculosis. He adjudges the occurrence of enlarged thoracic veins a fair index of involvement of the tracheo-bronchial glands, but not, of itself, an absolute sign. Enlarged cervical glands, he thinks, have little diagnostic value. Unilateral enlargement of the supraclavicular glands, on the contrary, is a sign of great importance. The only connection which Fishberg could discover between the occurrence of tuberculosis and the presence of enlarged tonsils, adenoids, chronic nasal catarrh, etc., was that the conditions were often associated. He could find no proof that either had any ætiological relationship to the other.

"Most of the external stigmata of tuberculosis in childhood, such as tuberculides, lichen scrofulosorum, erythema nodosum, phlyctenula, blepharitis, chronic conjunctivitis, etc., which European pediatricists, especially Hamburger, describe, were exceedingly rare among the children here considered. . . . It seems to me that they [the stigmata] owe their origin more to filthy habits and surroundings than to tuberculosis." Of 692 children examined, 67.25% reacted positively to the von Pirquet test. The proportion of positive reactions increased steadily with increasing age, from 15% in the first year to 74.5% between the ages of 11 and 14, inclusive. Taking the fourteenth year by itself, 83.79% of the tests were positive. The figures are not suitable for comparison with the ordinary statistics, as they do not represent hospital cases. (*To be continued.*)

ST. PAUL MEDICAL JOURNAL.

(May, 1914, xvi, No. 5.)

Abstracted by CHARLES T. SHARPE, M.D.

RECENT ADVANCES AND INVESTIGATIONS IN SYPHILIS WITH SPECIAL REFERENCE TO SYPHILIS OF CENTRAL NERVOUS SYSTEM. C. D. FREEMAN, p. 300.

A general review of the treatment of syphilis with a report of a case of a male, 30 years of age, who has had repeated apoplectiform attacks affecting mostly the legs and who improved under intraspinal treatment.

THE PROS AND CONS OF INTRASPINAL MEDICATION. E. M. HAMMES, p. 315.

Hammes, working with Riggs, and using the Swift and Ellis method of injections in cases of paresis, tabes, cerebrospinal lues and acute leucic infections, has given 65 injections in 20 cases and reports as follows.

There is frequently a rise in temperature up to 102° F. There may be some chilliness. In paresis the reaction is usually mild. In tabes there is almost invariably an increase in the lightning pains for 24 to 48 hours following the injections. In cerebro-spinal lues, especially when the symptoms indicate basilar

lesions, nausea or even occasional vomiting for a few hours is not unusual. The combined intravenous and intraspinal method of salvarsanized serum render the Wassermann in the blood and spinal fluid negative more readily than any other course of treatment and also influences the cytobiological and chemical reactions favorably; usually the pleocytosis disappears first, the Wassermann is likely to disappear next and finally the globulin excess.

INTERSTATE MEDICAL JOURNAL.

(November, 1913, xx, No. 11.)

Abstracted by CHARLES T. SHARPE, M.D.

THE TREATMENT OF SYPHILIS. RICHARD L. SUTTON, p. 1032.

Sutton uses the intermuscular injections of salvarsan followed by active mercurial treatment, preferably injections of biniodide daily or on alternate days, and continues for three months. If injections are impracticable, daily inunctions of mercurial ointment, pushed until the physiological effect is obtained, with a hot Turkish bath once or twice a week, he considers the next most efficacious plan. In children, inunctions, or bichloride or gray powder by the mouth, give the best results. After a brief rest, a second mercurial routine is taken up and continued for three months.

As a satisfactory formula for a non-soluble preparation of mercury he advises:

R: Mercurous salicylate	2.0
Anesthesin	2.0
Lanolin	4.0
Olive oil	30.00

Met. Sig: inject 1. cc. (15 drops) in gluteal muscles twice weekly. He considers sodium cacodylate worthless. He does not approve of intravenous injections of salvarsan.

SYPHILIS OF THE NERVOUS SYSTEM IN INFANCY, CHILDHOOD AND EARLY ADULT LIFE. WILSE ROBINSON, p. 1038.

This is a splendid resumé of the subject.

1. Lesions of the nervous system secondary to congenital or early acquired syphilis are of quite common occurrence.

2. Those lesions secondary to syphilis which are acquired in infancy or early childhood do not differ in kind or degree from the lesions secondary to congenital syphilis.

3. There may be evidence of gross lesions of the nervous system secondary to syphilis and yet be no obvious symptoms or signs of syphilis.

4. By the aid of the Wassermann test of the blood or cerebrospinal fluid and by a cytological and chemical examination of the cerebrospinal fluid, many obscure conditions may be demonstrated as being secondary to syphilis in which syphilis may not be suspected and cannot otherwise be demonstrated.

5. Hydrocephalus, meningitis and convulsions during early infancy are very commonly secondary to syphilis.

6. The so-called idiopathic type of general epilepsy is not an unusual sequence of syphilis of the young. The Jacksonian type of epilepsy quite frequently occurs secondary to cortical lesions of syphilitic origin.

7. Lesions of the spinal cord other than tabetic are unusual in syphilis of the young.

8. States of mental defectiveness are very commonly caused by syphilis.

9. Any lesion of the nervous system occurring in the young is serious. This is especially true of those lesions occurring secondary to syphilis.

10. Some forms of meningitis, gummatous formations, epilepsy, pseudotabes and a few other conditions occasionally respond to treatment. Juvenile paresis and tabes do not yield to treatment.

11. The treatment should be antisyphilitic and should be pushed to the limit.

SYPHILIS OF THE RECTUM. J. M. FRANKENBURGER, p. 1045.

While this paper does not contain anything essentially new, it serves to emphasize the importance of a thorough examination—a rare occurrence, to quote the author.

"If in every case of syphilitic infection of one end of the intestinal canal—namely, the mouth and throat, careful observation of the other end of the tube,—the anus and rectum were made, the writer is satisfied that many lesions of those parts would be found which are now being overlooked.

Only by early and energetic treatment can the formation of strictures be obviated, which are as incurable as cancer, and which many times render the patient's existence so miserable that a colostomy is the only relief that makes life bearable."

CLEVELAND MEDICAL JOURNAL.

(March, 1914, xiii, No. 3.)

Abstracted by CHARLES T. SHARPE, M.D.

SOME FACTORS IN THE DIAGNOSIS AND TREATMENT OF SYPHILITIC AORTITIS. WARFIELD T. LONGCOPE, p. 141.

Longcope reports the results obtained in the treatment of 31 cases of syphilitic aortitis. "Of these, 80.6 per cent. have shown temporary but often very striking improvement. But relapse has been the rule and only 9, or 29.0 per cent., of the patients are known to be alive; over half, or 55.5 per cent., are known to have succumbed. The improvement has manifested itself as cessation of pain and attacks of paroxysmal dyspnoea and angina pectoris with general feeling of well being, increased strength and recovery from mild grades of cardiac failure. When cardiac failure was severe, duration of life has been very short, both in treated and untreated cases. Many die suddenly."

A splendid résumé of the article is furnished by the authors and is here given.

"Syphilitic aortitis is a common manifestation of tertiary syphilis, in this respect approaching in frequency tabes and paresis. It is, moreover, in many instances associated with syphilis of the central nervous system. The diagnosis in most instances is first made after the appearance of aortic insufficiency, aneurysm or angina pectoris, and when such symptoms as pain, paroxysmal dyspnoea and evidence of slight heart failure have already appeared. Without these signs, dilatation of the aortic arch is the most reliable evidence, though cases of non-syphilitic dilatation may occur, presenting exactly the same clinical picture as syphilitic aortitis. A positive Wassermann reaction is, therefore, essential for an accurate diagnosis.

The results of treatment with salvarsan and mercury have rarely given more than temporary relief. The reason for this seems to depend at least in part upon a number of factors. Owing to the danger of Herxheimer reactions, only small doses of salvarsan can be administered safely intravenously, though mercury seems to be without harm. Prolonged treatment is, therefore, required. In the second place, once symptoms have appeared, the life of the individual is very short, from 65 to 70 per cent. of the cases living only one to two years. To overcome this factor it is necessary to make the diagnosis early and institute treatment before

irreparable damage has been done. And finally, the eradication of the disease, on account of the situations of the spirochæta, peculiarly protected from the blood stream, is especially difficult. In an attempt to break down this barrier, potassium iodide in large doses may be of assistance, and must be combined with prolonged and persistent specific therapy." This article is well illustrated with skiagrams.

RADIUM. WILLIAM T. CORLETT, p. 180.

The author reviews briefly actino-therapy, the Finsen light, Roentgen rays and radium, rendering an interesting and instructive exposition of the subject.

CALIFORNIA STATE JOURNAL OF MEDICINE.

(May, 1914, xii, No. 5.)

Abstracted by CHARLES T. SHARPE, M.D.

BASIC PRINCIPLES OF ECZEMA. ERNEST DWIGHT CHIPMAN, p. 190.

Chipman reviews the various definitions of eczema and discusses the merits of these. He advocates considering it as a cutaneous reaction which results from external or internal irritation in certain subjects. He recognizes four forms: 1, Erythema. 2, Vesicles. 3, Papulo-Vesicles. 4, Nummular or trichophytoid eczema or eczema en plaque. He then discusses the relationship of dermatoses to internal conditions, quoting the theories of Besnier and Brocq, and the danger of healing an eczematous condition too quickly under certain circumstances.

He epitomizes the treatment of eczema in the phrase—if acute, soothe; if chronic, stimulate.

VIRGINIA MEDICAL SEMI-MONTHLY.

(May 22, 1914, xix, No. 4.)

Abstracted by CHARLES T. SHARPE, M.D.

LUETIN: ITS PREPARATION. W. B. NEWCOMB, p. 83.

THE EMPLOYMENT OF LUETIN WITH REPORT OF TWO INTERESTING STUDIES. D. LEE HIRSCHLER, p. 85.

The author reports two cases with negative Wassermann but positive luetin reactions.

BOOK REVIEWS.

TREATISE ON DISEASES OF THE SKIN. By HENRY W. STELWAGON, M.D., Ph.D. Professor of Dermatology in the Jefferson Medical College, Philadelphia, etc. Seventh Edition. Thoroughly revised, with 334 Illustrations in the Text and 33 full-page colored and half-tone plates. *W. B. Saunders Company*. 1914. Philadelphia.

As a result of the vast amount of work done recently in various medical specialties, the modern text-book has become for the most part a compilation of discoveries, theories, opinions and experiences of other men. Some authors possess the happy faculty of impressing their individuality upon whatever they write or compile and the reader finds something upon every page which establishes a delightful relationship of teacher and pupil. Others merely record the estab-

lished facts of their speciality; discuss the recent advances which have been made in the various lines of research; mention remedies and methods of treatment old and new, good, bad and indifferent without any decided statement as to personal preference, and the reader finds himself in no closer touch with the author than one who turns the pages of a cyclopædia.

For ten years or more the text-book of Prof. Stelwagon has been well and favorably known to the medical profession and every dermatologist in this country, at least, regards it as an indispensable addition to his library. While his work lacks the personal element which is characteristic of certain other modern authors, it contains far more mention of the large and increasing literature of nearly every disease and consequently deserves the highest praise as a book of reference. The exacting labor of gathering together and sifting the writings, investigations and opinions of others (as mentioned in the preface) may or may not be of great value to the busy practitioner, but it certainly has proven to be a time-saving help to his dermatologic colleagues.

Like nearly every modern dermatological text-book and quite unlike those of a former generation, the work is copiously illustrated. Some of the photographs reproduced in half-tone are excellent, while others are not beyond criticism. The illustrations of erythema multiforme, dermatitis herpetiformis and some other affections are admirable, but those of pellagra, pityriasis rosea, lichen planus and the distorted views of variola, taken by a lens ill adapted to the purpose, are not quite up to the modern standard set by Sequeira and other authors. The colored plates are less satisfactory than the photographs, and add to the expense more than to the value of the book. The present edition, the seventh, has been thoroughly revised, is printed in very clear type and deserves the success which it will undoubtedly achieve.

G. H. F.

THE READY REFERENCE HAND-BOOK OF DISEASES OF THE SKIN.

By GEORGE THOMAS JACKSON, M.D., late Professor of Dermatology, College of Physicians and Surgeons, New York. Seventh Edition, thoroughly revised. 115 illustrations and six plates. *Lea and Febiger*, New York and Philadelphia, 1914.

The popularity of this valuable book on dermatology is shown by the recent appearance of its seventh edition. This is larger by 32 pages than the preceding edition, but still remains what its name implies, a ready reference hand-book. The alphabetical arrangement and its size make it a most convenient volume for quick reference. Though small and compact, it contains in its 726 octavo pages an unusual amount of practical, up-to-date information upon dermatology.

The first portion of the book, which is short, discusses briefly the anatomy and physiology of the skin, and the general diagnosis of skin diseases. It also includes some therapeutic notes upon newer methods of treatment. The second or main part of the volume is devoted to a description of 257 different diseases of the skin, arranged in alphabetical order. The book contains 121 clinical and pathological illustrations, more than 350 references to the literature and a selected formulary. There are also short contributions by other authors on vaccine, salvarsan and X-rays.

Many of the sections of the preceding edition have been entirely re-written and new sections have been added upon the following diseases: Acarodermatitis urticarioides, cutis verticis gyrata, eczema marginatum, eczematoid dermatitis, erythema figuratum perstans, gangosa, granuloma coccidioides, ground itch, hemisporosis, keratoderma gonorrhoeica, leukæmia cutis, lichenification, lichen nitidus, lichen planus sclerosus et atrophicus and trypanosomiasis.

It should be added that the work of the publishers, Messrs. Lea and Febiger, has not fallen below their usual standard of excellence.

H. F.

THE JOURNAL OF CUTANEOUS DISEASES

VOL. XXXII

NOVEMBER, 1914

NO. 11

A CLINICAL, PATHOLOGICAL AND EXPERIMENTAL
STUDY OF THE LESIONS PRODUCED BY THE
BITE OF THE "BLACK FLY" (*SIMULIUM VENUS-*
TUM).

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(From the Department of Dermatology and Syphilology, University of Michigan,
Ann Arbor.)

PART ONE.

THE bites of blood-sucking insects, notably mosquitoes, fleas, bed-bugs, ticks and certain flies, have, as a result of comparatively recent investigations, assumed an increasingly important rôle in our understanding of the transmission of various diseases. These general considerations have for the time being overshadowed the more immediate effects of the activities of insect pests, and relegated pathological and experimental studies of the lesions produced by them to the background. To the writer's surprise, after his first encounter with the black fly in the northern part of Michigan, he could find no description of the local or general effects of the bite in the dermatological literature. Flies of this genus are widely distributed over Europe and America. They give rise each year to a great deal of annoyance, not to say misery, in man. Their economic importance as cattle pests in the countries where they are abundant has earned them considerable attention and an unenviable reputation. The work of Sambon, Roberts, Hunter, Anderson and Goldberger and others has been undertaken in the hope of connecting flies of the genus *Simulium* with the transmission of pellagra, but so far as can be ascertained has not concerned itself with the bite of these flies as such. In view of these considerations it seemed desirable that a study having the scope of the present one be undertaken. The experiences of a residence in the vicinity of the University of Michigan Biological

Station on Douglas Lake, Cheboygan County, Michigan, at the height of the fly season in June of the present year, form the basis of the material presented. The first half of the paper is planned to include a brief account of the fly itself, a review of the literature and a description of the lesions produced with their associated manifestations. The second part will comprise studies of the pathology of the lesions in man and experimental studies in the reproduction of the lesions from preserved material, together with observations on the behavior of the toxic agent.

BIOLOGY OF THE GENUS *SIMULIUM*.

The thoroughness with which the biology of this genus of flies has been worked out is in marked contrast to the scantiness of the literature dealing definitely with the effects of its bites on man and animals. Excellent reviews of various phases of the former aspect have been published by Riley,¹ Johannsen,² Forbes,⁴ Malloch⁵ and others in this country. The following description is in part abstracted from those of the writers named. The black flies or sand flies of northern latitudes include *Simulium venustum* and *Simulium vittatum*, which are widely distributed as far northeast as Labrador on this continent, westward through the Great Lakes region to Kansas and southward along the larger rivers in the Middle West. The principal southern species, *S. pecuarum*, is colloquially spoken of as the southern buffalo gnat, from the resemblance of the profile to that of a charging buffalo. The latter species swarms in enormous numbers through the bottom lands of the principal rivers, including the Mississippi, Ohio and Wabash, especially at times of overflow. In addition to tormenting man, the damage done to stock by the buffalo gnat is very great, and the sufferings of animals are said to be almost indescribable. In addition to these principal American species, the genus *Simulium* includes South American and Australian forms, the sand-flies of Great Britain, Northern European species, and the famous and much-dreaded "*Columbaezermucke*" of Hungary. The adults are small, varying from 1 to 4.5 mm. in length according to species, those observed by the writer not exceeding 3 mm. in length. The head is very small, the thorax large and squarish, the wings transparent and broad. The females alone are blood-sucking. Leon¹³ (1909) has made a detailed study of the mouth-parts of the Hungarian species, *S. columbaezense*. The bite is produced by the short sharp stylet, and saliva forced into the wound when the sucking of blood is begun. This author states that after the fly is satisfied a drop of venom is left in the wound, but that the action of the poison-

ous agent is not yet known. He believes that the saliva acts in part as a local anæsthetic, and serves further to render the blood more fluid. All species of *Simulium*, owing probably to the shortness of the puncturing apparatus, select, when not too hungry or numerous, sites for their attacks where the hair is less abundant and the skin thin and highly vascularized. In animals they are said to bite along the course of superficial veins. The flight of the adult insects is rapid and "jerky," and almost noiseless except when very close to the ear. When numerous they travel in dense swarms, and when they attack, envelop the victim in a veritable haze of flying bodies. They make headway with difficulty against wind, and can be outrun for the moment, but promptly come up and resume the attack. Swarms may be carried long distances from the breeding grounds by unfavorable winds. The assault is uniformly described as ferocious and persistent. Fortunately, the flies seldom infest dark places such as houses, and can be driven off by smudges or destroyed by a heavy storm of wind and rain. *S. venustum* and others of the genus seldom bite after sundown, although Barnard states that the South American species are also active at night. It is the common experience of sportsmen and naturalists that the flies remain in or near the underbrush, and are especially numerous along the banks of running streams, where they remain concealed beneath the leaves of the scrub vegetation, giving no hint of their presence until they issue in swarms. When numerous they crawl into openings in the clothing, up the trousers-legs and sleeves, under loose collars and hat-bands, inflicting their bites in unexpected places remote from the point of entry. They are said even to enter the respiratory passages of animals when they attack in sufficient numbers, and to bite in these situations.

The larval and pupal stages of the Simuliidæ are aquatic and require a favoring environment in that specially free oxygenation of the water is necessary to their development. Accordingly, they never breed except in cold running water, and then only when there are smooth objects such as stones, sticks, trailing grass and vegetation to which the larvæ can attach themselves by their suckers. A period of about two months elapses between the egg and the perfect forms. The adults are short-lived, but by the appearance of second broods the season may be considerably prolonged. In the more northern latitudes the flies are usually at their height during the month of June, and are present until late August in diminished numbers. The season is earlier farther south. The adults cannot be kept alive in captivity more than forty hours, and the immature forms require for

artificial raising the special conditions mentioned. Complete accounts of the biology of this genus are referred to in the bibliography.

REVIEW OF THE LITERATURE.

The literature on the clinical and pathological aspects of the lesions produced by various Diptera which attack the skin for nourishment only or in self-defence is rather small, and little attention seems to have been given to the lesions produced or to possible general symptoms arising from them. The American literature contains several discussions of the severe dermatoses to which the bites of mosquitoes may give rise in non-immune individuals, including the contributions of J. C. White¹⁹ (1871) and Hyde²⁰ (1892). There are also a number of reported cases of more or less serious damage done by bees, wasps and mosquitoes (see for example *Jour. Cut. Dis.*, 1903, xxi, p. 433). The immunity which develops as a result of repeated exposures to insect bites is discussed by White (cited above) and by Morse²¹ (1896). Langer (1896 *et seq.*) has contributed probably the most complete and systematic study extant of the pathology of a lesion produced by non-parasitic Diptera, and the physiological chemistry of the toxic agent in his publications on the bee-sting, to which detailed reference will be made later. With respect to *Simulium*, Schoenbauer is said by Riley to have written on the Columbaez gnat over a century and a quarter ago, and is said to have witnessed autopsies on the bodies of animals killed by the attacks of the flies, but the writer has been unable to secure a direct reference to his work. Riley¹ (1886) collected and published in his report as Government entomologist, several accounts of fatal attacks on man, which are cited by Forbes⁴ (1912). Webster⁶ (1904) is also quoted as having collected other accounts.

Williams⁷, (1897) writing in connection with a discussion of insects bites and immunity, carried through several numbers of *Nature* by various writers, gives a brief description of the so-called sting of the Norwegian midges and East Anglian gnats. The entomological identity of the insect is left unsettled, unfortunately, but it is known that many of the so-called gnats of European countries belong to the genus *Simulium*, which is found as far north as Greenland. The description corresponds very closely in certain features to the course observed in the lesions produced by the black fly, and is accordingly quoted. "A curious fact is that in many susceptible persons there is a distinct periodicity in the phenomena which follow a sting. The immediate result is a small flattened wheal, 3 to 4

mm. in diameter, of a pale color, but surrounded by a zone of pink injection. This is attended by itching, but both wheal and itching have gone in less than an hour. About twenty-four hours later, the part begins to itch again and in a few minutes a hard, rounded, deep-red papule, about 10 mm. in diameter appears, and is quickly surrounded by an area of œdematous skin. The formication is intense . . . In two or three hours the itching diminishes and the œdema disappears, leaving a small red papule which itches little if at all. After another interval of twenty-four hours or more often, rather less, all the phenomena recur but with diminished intensity; a third, a fourth and even a fifth recurrence usually takes place, but on each succeeding occasion the itching and the swelling are less severe. After the periodic exacerbations have ceased, a small indolent papule persists for weeks, sometimes for months. This periodicity is not observed in all persons and is certainly most marked in those who suffer most severely. In the same individual the reaction is very much greater after some bites than after others."

A periodic exacerbation of symptoms and the variable effect of bites in the same individual were noted by the writer in his own observations of the black fly bite as described below.

A very satisfactory description from the standpoint of this study is given in a report by Cantlie⁸ (1900) of an attack by Simuliidæ (sand-flies) upon a detachment of London Scottish Volunteers in a wood near Winchester, England. The victims were evidently non-immune. Cantlie's brief but excellent account is as follows: "The insects attacked the bare knees of the men. Little or no sensation was caused, either when they alighted on the skin or when they bit: but on being brushed off a small red spot was observable, around which speedily developed a circumscribed ecchymosis. In many instances only one or two bites occurred, but in the majority there were from twelve to thirty bites on each knee. . . . About four hours after being bitten one of the men of the corps felt cold and shivery and then got very hot, and noticed that the skin of the knees was becoming puffy and painful. . . . On taking his temperature he found it 102.5° F. This was but the forerunner of several dozens of cases, for within twenty-four hours a considerable number of those bitten presented the following signs and symptoms: fever from 100° to 102.5° F.; shivering and waves of heat and sweating; pain and stiffness around the knees; œdema extending from halfway down the thighs to the ankles. The œdema was excessive, especially over the legs above the garter and therefore below the exposed and bitten surface. In several, erythema extended from the

middle of the thighs to below the knee, and in a few the groin glands were swollen and tender. Even in those who were bitten by one or two insects only, the feeling of feverishness and local pain and œdema were distinct. In most instances hot boric acid fomentations allayed the erythema and soothed the pain and as a rule in thirty-six hours the acute symptoms disappeared; but in a few cases the limbs were so injured that a week passed without the man being able to get about as usual. The horses in the troop also suffered severely. . . .” Specimens of the flies captured on the spot were identified by Professor Nuttall as belonging to the genus *Simulium*, and Cantlie adds that two other medical men present with the troop and a number of medical students can bear witness to the occurrence.

The activities of the “*Columbaczermücke*,” the Hungarian representative of the Simuliide, have occupied a somewhat larger place in the literature than have those of the other species of this genus. Schoenbauer (1795), Moga⁹ (1890), Tómosvary,¹⁰ Frangulea¹¹ (1896), Blanchard¹² (1905), have written on the *Columbacz* gnat in its relation to man and animals. Unfortunately the writer has been unable to obtain the original works. Leon¹³ (1909), previously cited, mentions that a number of fatal cases are reported by these authors. He himself cites a case reported by Moga, in which a recruit was bitten once upon the upper lid of the left eye at four o’clock in the afternoon, April 19, 1888. By the following morning the œdema was so tremendous that the eye could not be opened, and the pressure upon the eyeball was so great that, although the œdema was reduced in four hours, gangrene from pressure had already begun, and the eye was lost. He gives it as Schoenbauer’s opinion that death in badly bitten animals was due to invasion of the air passages by the fly and mechanical asphyxiation from the œdema. Tómosvary, however, considers three factors in the fatal issue: anæmia from the tremendous loss of blood, a possible reflex nervous effect akin to shock, and thirdly the action of the toxic agent in the fly’s saliva. Leon rates the last as the principal factor, if not the sole cause, but states that another possibility should be considered, namely, that the fly introduces some organism responsible for the picture of prostration and death. He states that since he used alcohol-preserved material he was unable to determine this question bacteriologically. Georgewitch¹⁴ (1909), however, has described a trypanosome found by him in the stomach of the blood-sucking female *Columbacz* gnat, both young and adult forms of the parasite being present. They are found largely in the first brood of flies of the season, and in his opinion explain the greater

virulence of the bite early in the spring. On the other hand, he has never succeeded in finding any organism in the blood of bitten animals.

Steiner¹⁵ (1905) has described, under the title "Mosquito-fever," a syndrome in man which he believes to be due to the bite of an insect indigenous to Herzegovina and Dalmatia. The insect is at first spoken of as *Culex pipiens*, but the description given in the first of two articles applies much better to *Simulium*. In the second article he (Steiner¹⁶) revises his opinion as to the identity of the exciting cause, stating that experts had identified specimens as belonging to the "Similiaarten" (*Simuliidae*?), the species being probably "Similiareptans" (*Simulium reptans*?), which is given by Johansen and by Malloch as the European species probably identical with *S. columbaczense* Schoenbauer. The febrile reaction is colloquially known as "Hundskankheit" and is confined entirely to foreigners and strangers in the provinces in question, natives being immune. It occurs exclusively in the summer months, and is apparently confined to those who have been bitten by this fly. The local manifestations of the bite are as follows: the bite itself is somewhat painful, but the pain is promptly replaced by violent itching coincident with the development of a wheal, which is presently surmounted by a vesicle with a serous content. The intensity of the itching leads promptly to excoriation and secondary infection. A nodule develops which may vary in size up to that of a hazel nut. The shallow infected ulcer becomes covered with a crust, and beneath this the lesion involutes in 8 to 14 days. Furuncle may develop, and an eczematoid dermatitis from scratching. Lymphangitis seldom occurs. Severely bitten cases must be carefully differentiated from variola, especially late, when the crusts have begun to dry. The fly confines its activities to darkness, and Steiner apparently believes the condition to be the result of a sting rather than a bite. This is probably an error, however, which is in keeping with the naïveté of the author's entomology, witnessed by the uncertain identification of the insect in his first paper, and by his speaking of *S. reptans* as one of the *Lepidoptera*, a taxonomic group which is practically synonymous with butterflies and moths. The constitutional manifestations which Steiner believes should be regarded as part of the picture, and to which no definite ætiology has heretofore been assigned, consist of a chill with an abrupt and marked rise in temperature, coming on at once or within a couple of days after severe exposure to the bites. This onset is accompanied by malaise or prostration, in a number of cases by nausea and vomiting with

hyperacidity, and a diarrhœa. The conjunctivæ are injected, throat symptoms are slight, and there is no involvement of the bronchi or lungs. Liver and spleen are not enlarged, there may be slight febrile albuminuria and marked post-febrile bradycardia. Toxic delirium and neuralgic symptoms are frequently present. The temperature remains high for two days and on the third falls by crisis with a severe sweat. Complete convalescence occupies two or three weeks. The distribution of the disease through the provinces mentioned corresponds geographically with that of the fly in question. Immunity from constitutional manifestations is conferred by a single attack. Therapy is symptomatic and protection from the insects should be rigidly carried out. Immunity to the local manifestations develops gradually in the course of about three years' residence in the infested region. Reports of typical cases are given. While it must be conceded that this reaction-picture is not entirely distinctive, the resemblance of some of its features to those mentioned in Cantlie's report is apparent.

The economic damage done by the *Columbaez* gnat and by the southern buffalo gnat have evidently stimulated study of the effects of bites of flies of this genus in animals. Mules seem to be especially susceptible and were killed in large numbers by the buffalo gnat in the early 70's and 80's in the South, as many as 400 dying in a few days in three Louisiana parishes. Hogs show relatively few early effects (Riley), but later die in large numbers from extensive ulcerating sores. King, a veterinary surgeon quoted by Riley, performed many autopsies on animals killed by buffalo gnats, and gave it as his opinion that the effects were similar to those of rattlesnake venom. Moga's description seems to be extensively quoted. When bitten by large numbers of gnats, the animal first becomes violently excited (Riley), and then prostrated. There is engorgement and later pallor of the mucosæ, the eyes staring and injected, the gait becomes staggering and convulsive movements may occur. Appetite is completely lost and the animal is constipated. There is high fever and rapid pulse, and in fatal cases the latter soon becomes imperceptible. All writers speak of the debilitating effect upon cattle of prolonged exposure to the bites. The occurrence of delayed reactions in even severely bitten cases is mentioned.

Megnin¹⁷ (1895) discusses the local lesions produced by *Simulium* in horses, noting especially the tendency of the insects to mass a number of their bites in a circumscribed area, which seems to be quite characteristic of this genus. Early symptoms from the bite are few, but in the course of a few hours a nodule develops, with local

heat, tenderness and œdema. Marked exfoliation accompanies the involution and an eczematoid condition may supervene, especially marked on the ears. Severely bitten animals may show extensive crusted areas with loss of hair. Megnin has seen a guttate psoriasiform efflorescence appear on the ears of susceptible animals as a result of bites. Involution occurs spontaneously.

The experiences of naturalists, sportsmen and travellers with the black fly form a chapter in the literature notable for vivid and picturesque description. While the mosquito is a pest, and the writer believes that he has seen it at its worst in the New Jersey swamps, the black fly apparently outranks it in crippling capacity. The descriptions in Agassiz's "Lake Superior," Packard's "Our Common Insects," and Barnard's account of the South American species, all bear testimony to the terrors of the black fly in infested regions. There seems little occasion for doubt that an encounter which finds the man unacquainted with the fly or unprepared for attack or far from shelter, may have serious and even fatal consequences. That such a situation is by no means an affair of the past is shown by the experience of the University of Michigan Biological Station and the Engineering Camp, which was obliged in 1909 to postpone opening for one week on account of the flies. A member of the Engineering Faculty and his assistant, who went up to the site of the camp to prepare for opening, were so seriously affected by the bites of the flies that they were obliged to give up work and abandon the camp until they had recovered.

DESCRIPTION OF THE LESIONS.

The writer's study is confined entirely to the lesions and accompanying manifestations produced by *Simulium venustum*, which is the only species found in Cheboygan County, Michigan. It will be seen, however, that it accords in the main with those given in the literature for other species of this genus both here and abroad. The writer's attention was first drawn to the subject by personal experiences during a brief vacation, and no accurate observations were made upon constitutional symptoms because they were not conspicuous enough among the members of the writer's party to attract special notice. That they are a much less frequent accompaniment of the bite of this fly than of the European species would seem to be the inference from such reports as those of Cantlie and Steiner. There are, however, well authenticated cases of general reaction from the bites of *Simulium venustum*, but none have come under the writer's personal observation.

While the familiar urticarial wheals of the mosquito occasionally give rise in susceptible individuals to severe bullous dermatoses, and take on something of a subacute character, the process is usually acute. The bite of the black fly, on the other hand, is not an evanescent affair in the large majority of non-immune cases. It passes through a definite cycle of changes covering a number of days, involving marked pathological changes in the affected skin. Even when not subject to excoriation from scratching or secondary infection, it terminates not infrequently in an approach to actual scar-formation. There is, moreover, associated with the black fly lesion a distinctive local reaction on the part of the lymphatic system, a satellite bubo, which has never, so far as the writer knows, been described for the commoner insect bites. This adenopathy forms a unique and distinctive feature of the clinical picture in this case.

The black fly's method of attack is of some interest and explains why one unfamiliar with the insect can be badly bitten before he becomes conscious of what has occurred. As previously noted, the fly is small and inconspicuous, and the flight is noiseless. Moreover, the insect attacks with boldness and is not readily driven off, and the hardness of the thorax enables it to creep into places where friction and pressure would destroy a mosquito. Clothing is adequate protection from the bites of the fly from without. The biting members of the genus *Simulium* all exhibit a marked preference for thin-skinned and inaccessible portions of the body, and surprise the observer by the determination with which they seek the back of the neck or the hair line. The skin of the face about the eyes and nose, the cheeks and forehead, are noted by all writers to be especially subject to attack in man. This localization, combined with the massing of bites in a small circumscribed area, give rise to a highly characteristic picture in typical cases, and one that can be recognized at a glance. The presence of fresh bites seems to attract the fly, and the writer has watched flies run up and down his arm as if undecided where to attack until they reached a point where there were other bites, whereupon they promptly made their punctures near the first ones. As many as a dozen punctures were noted on a child's face within an area on the cheek not much larger than a silver dollar. There were almost none elsewhere on the face. The next feature enabling the fly to do its work unrecognized is the fact that the puncture is absolutely painless, not only at the time it is made, but usually for some hours after. The painlessness of the puncture and the usual absence of early signs is in accord with the observations



FIG. 1.

FIG. 1.—The Buffalo-gnat, *Simulium pecuarum*, adult fly. Enlarged 10 diameters. (From Forbes after H. Garman.)



FIG. 2.



FIG. 3.

FIG. 2.—The Black Fly, *Simulium venustum*, female, front of head. Enlarged 35 diameters. (From Forbes after H. Garman.)

FIG. 3.—The Black Fly, head and thorax of male from above. Enlarged 22 diameters. (From Forbes after H. Garman.)

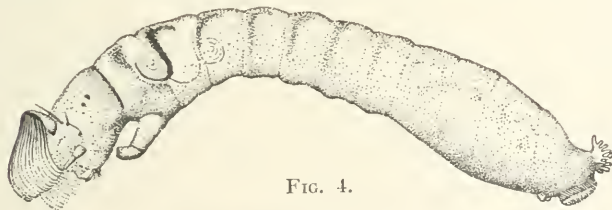


FIG. 4.

The Black Fly, *Simulium venustum*, larva, lateral view. (From Forbes after H. Garman.)

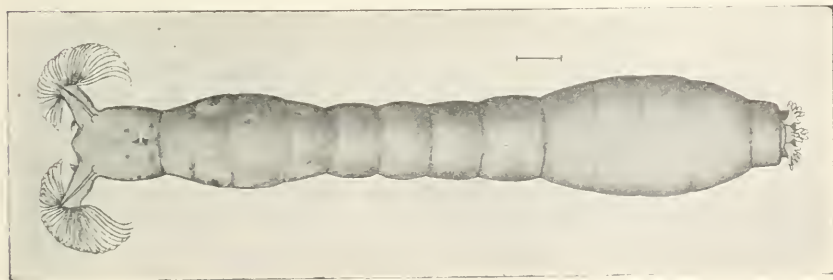


FIG. 5.

The Black Fly, *Simulium venustum*, larva, dorsal view. (From Forbes.)

of Cantlie,⁸ Williams⁷ and Megnin.¹⁷ Leon's¹³ opinion that the fly injects a local anæsthetic with the saliva would seem to be very plausible. So painless is the bite that a fly may fasten itself upon the eyelid without attracting attention. The process of biting is easily watched. The fly hurries nervously about after alighting, the front legs in constant motion. It may indulge in several short, jerky flights and return to the same site. The puncture is made abruptly. As soon as the fly is well established the legs are folded along the abdomen and the fly remains attached apparently only by the mouth parts. It can with difficulty be persuaded to abandon the host at this stage of the procedure, and holds on with remarkable tenacity. The abdomen slowly distends and the reddish sheen of the drawn blood can be seen through the wall. A point of some interest, in view of the belief that blood-sucking parasites increase the flow of blood by the material they inject, is found in the appearance, toward the last of the bite, of a slight hyperæmic areola around the point to which the fly is attached. The writer has a sketch in his field notes which shows a decided suggestion of a capillary dilatation. When satisfied, the fly either takes wing or, if too distended, drops off. The withdrawal of the proboscis is the signal for the appearance of a minute droplet of lymph, followed at once by a hæmorrhage which is often remarkably profuse, considering the minuteness of the puncture. The writer has noted an actual trickle of blood for nearly ten minutes from an arm bite. This hæmorrhage, usually less marked, is highly characteristic, and the clot at the site of puncture enables one to recognize the bite in the early stages on sight. It does not invariably occur, however, and driving off the fly before it is satisfied does not necessarily influence its appearance. If the blood be wiped from the lesion it will be seen that the hæmorrhage occurs beneath the skin as well as through the puncture, giving rise to an ecchymosis varying in size from a pinpoint to several millimetres in diameter.

Up to this point the picture holds for practically all persons, immune or non-immune. In considering the local reaction which now occurs, individual differences in susceptibility to the injected toxic material play a large rôle. This is, of course, a familiar observation in connection with insect bites, and wide variations may be noted. The usual course is the one here outlined. Up to this point the fly has done its damage practically without arousing symptoms, and often without the knowledge of the victim. The bearing of this fact on the severity with which children are bitten is apparent.

The first definite evidence of local reaction consists of a gradual

extension of the hyperæmia, noted while the insect is still sucking. The punctum becomes more elevated, and no traces of a central opening or of any part left in the wound by the insect can be detected. In from one to six hours, most often three to six hours but sometimes longer, a flat, round, mildly inflammatory papule slowly develops with the punctum as a centre. There is no rapid wheal formation with blanching of the papule, as in the mosquito bite. In the cases observed, this lesion seldom attained a diameter greater than three millimetres in six hours. In the course of the next twelve to twenty-four hours the papule enlarges to a diameter of 8 to 10 mm., and acquires a plaque-like, fleshy induration, or becomes a firm, rounded nodule, still mildly inflammatory and often palpable rather than visible. Severe bites progress more rapidly, and may have reached and passed this stage within six hours. This is the exception, however. The number of lesions and the thinness of the skin, the latter point as noted by Steiner, seems to influence the extent of the reaction at this stage. With grouped lesions about the face and eyes there may be extreme œdema with heat and redness, and even discoloration from ecchymosis. The face may become quite unrecognizable. It is in such cases that the vesicular stage rapidly supervenes. A certain percentage of bites in less susceptible individuals, and in most persons late in the season, do not pass beyond the papular stage, but remain as firm, shotty nodules until involution sets in, in the course of ten days to two weeks. All degrees of pruritus may be experienced at this time, but, as a rule, the symptoms are mild unless the bites are numerous.

The vesicular stage into which the papules now pass in the typical evolution begins with slight shrinkage of the early papule, which thus becomes more elevated. A central vesicle develops around, or replaces the punctum, whose hæmorrhagic spot of discoloration may still be visible in the epidermis. The vesicle is tense, flattened or domeshaped, not umbilicated, and may be rubbed or scratched off entire, leaving an oozing surface. The lesion at this stage resembles very strongly the vesicular stage of a varicella, but is usually much less inflammatory. The pruritus reaches its maximum intensity at this stage, and may be so violent that the papule is razed to the skin level in the futile effort to secure relief. Lesions which are left untouched present apparently a spontaneous rupture of the vesicle, which does not, however, collapse entirely, but leaves an elevated, oozing or crusted papule. The vesicles apparently re-form, and the process may be repeated. Vesicles are not necessarily single, a central larger one often being surrounded by a corymbose group of

smaller ones. The weeping papule resulting from the rupture of papulo-vesicular lesions is again a highly characteristic feature. It is at this stage that the tendency to confluence is most noted, and a number of closely set bites may be transformed into a large weeping patch with extreme pruritus and much crusting. Repeated rubbing or scratching results in shallow indolent ulceration, with seemingly little or no tendency to secondary infection or hæmorrhage. The writer was impressed with the way in which the lesions preserved their pathological identity, without the formation of furuncles or abscesses, or even any sign of purulent discharge, in the face of repeated trauma. The familiar ill-effect of scratching upon an urticarial lesion is notable in the case of these bites at this stage, and results in transient wheal-formation and an exaggeration of all the symptoms.

Once the vesicle is given an opportunity to dry or crust over, it enters upon the last stage of its course. This evolution occupies several days. The papular base with its crust undergoes marked shrinkage, and becomes more circumscribed, superficial and elevated, although still distinctly shotty. Grouped lesions at this stage may suggest those of a late variola. The conspicuous feature of this late papule is its persistence, and a marked tendency to periodic exacerbation, especially of the pruritus. The itching in most of the cases observed occurred in the morning on rising, and resulted so promptly in rubbing or scratching that it was impossible to determine whether unprovoked visible changes occurred at the same time in the papule. Between exacerbations the papules attract little attention. Irritation by rubbing results in the appearance of a wheal about the papule, but this promptly subsides. A first crop of lesions on the neck of a young woman remained practically stationary in this stage for ten days, always indolently inflammatory, itching in the mornings on rising and oozing promptly when the crusts were rubbed off. A little friction over the site of even a three weeks' old lesion may give rise to a marked pruritus, and one may find himself tearing an almost involuted and scarcely visible lesion as a result of a sudden unprovoked attack of itching.

Scar-like formations occur apparently even in lesions which have been carefully protected from trauma and infection. The scar is flat, smooth and shiny, somewhat smaller than the papule and depigmented in some cases, the depigmentation being, of course, most conspicuous in areas of sunburn and the like. The author's scars are only just disappearing, seven weeks after the bites, and the depigmented macules on the forearm are still visible against the remains of the summer tan.

An effort was made on two occasions to determine at what stage of the bite the toxic material was injected by the fly, and whether interruption of the procedure would result in abortive lesions. One fly was interrupted very early in the bite, before its abdomen showed any visible distention, and the other when about half through the ordinary time of the bite. Both lesions failed to reach a vesicular stage, and the papules developed much more slowly than usual, but were, on the other hand, decidedly persistent and recurrently pruritic. The results must be accepted as inconclusive, inasmuch as abortive lesions were observed in full-time bites as well. They would appear to show, however, that some toxic material is injected from the first, and not the entire dose at the end of the bite, as asserted by Leon. The occurrence of a visible vascular dilatation during the bite may be regarded as external evidence that the toxic agent has a special and immediate effect on the local blood vessels. The local reaction to the bite and the course of the lesion seems to vary somewhat with the part of the body involved, the violent reactions occurring largely upon the face and neck. There is also possibly a variation in the virulence of the flies. For example, all the bites of one afternoon's crop, when the flies were especially active and persistent, became vesicular in less than the usual twelve hours, and in the case of a small child within three hours. This was noted in three different persons bitten at the same time in the same neighborhood. The impression made on the observer is that there are other factors of a local nature influencing the course of the lesion, in addition to a possible systemic immunity.

A satellite adenopathy is a well recognized and characteristic feature of the symptomatology of black fly bite, and developed in all non-immune individuals bitten about the face, neck and scalp, who came under the author's observation. It is generally conceded by those of the author's acquaintance who have seen the fly in camp life, to be the most striking and often the most distressing part of a person's early experience with the insect, and the writer can vouch personally for the fact that the black fly stiff neck is something not easily to be forgotten. Cantlie⁸ mentions painful inguinal adenopathy associated with the bites about the knees in his cases, but aside from this I can find no mention of it in the available literature, nor have I been able to find reference to a similar condition in connection with the bites of other insects. The writer cannot recall, in a fairly large experience with the bites of the mosquito, a single instance of a similar reaction on the part of the lymphatic system.

Cervical bubo is the typical form and, in the author's experience, the only form observed. Twelve or more bites on the forearm failed to result in palpable enlargement of either the axillary or epitrochlear nodes, whereas half that number of bites on the neck produced a marked reaction in the cervical glands. The bubo seems to develop in the majority of susceptible cases within twenty-four hours after the bites. The first symptom, as a rule, is an increasing tenderness, with stiffness and pain on turning the head. The posterior auricular and occipital groups seem to be especially prone to be affected, and "swollen behind the ears" is a stock camp phrase for the appearance produced. The adenopathy combined with the œdema from the bites may be so marked as almost to obliterate the contour of the lobe of the ear. The glands are discrete, often much enlarged, moderately soft, and not outwardly inflammatory. No signs of lymphangitis were seen in any of the cases under observation. The pain is much like that of a torticollis, and the patient goes about holding the head rigid on the shoulders, the picture of discomfort and vexation. In the writer's own case the posterior auricular glands were involved from two bites behind the ear, and the tenderness was noted almost before the papules were well developed. Twelve bites on the neck and scalp produced a striking adenopathy, visible as well as palpable. Some of the posterior cervical groups were as large as hazel nuts. In severity it certainly surpassed the adenopathy of an acute tonsillitis. Involvement extended to the clavicle.

As with the other manifestations, the duration of the adenopathy is variable, but seems to be seldom less than two or three days. The tenderness disappears first. The enlargement may persist as long as a week or two. An exacerbation both of swelling and tenderness was observed in one case with a second crop of bites.

A number of ætiological possibilities for this typical and constant adenopathy present themselves. The writer has not as yet succeeded in producing it as he has the lesion, from the preserved material, a procedure which would effectually rule out the element of an infectious agent. That adenopathy forms a recognized part of the reaction of the body against foreign proteins is evidenced by its occurrence in serum disease as described by von Pirquet and Schick.¹⁸ It is possible that the fly at the time of the bite introduces an organism into the body against which the lymphatic system offers a local resistance. It may also be contended that secondary infection from scratching introduces organisms that are responsible for the local lymphatic reaction. Against the last-mentioned view the following considerations may be advanced. In the first place, the general picture of the process in the lesion itself is not that of a second-

ary infection, with suppuration, pustule and furuncle formation, etc. In the second place, the adenopathy is a comparatively early manifestation, and begins to subside while the field for secondary infection is at its best, and the patient is vigorously cultivating it by repeated scratching. Thirdly, the lesions are to all appearances closed against the entry of toxic or infectious agents except those introduced by the fly itself, until the adenopathy is well developed. Finally, a case under the writer's observation illustrated in his opinion the direct ætiological relation between the bite and the adenopathy. This young woman had a severe lymphatic reaction following twelve bites on the back of the neck. While the lesions were still active and oozing whenever they were touched, tenderness disappeared and the adenopathy began to subside. She then acquired ten more bites in the same region, and within twelve hours the glands had increased one-third in size, the tenderness was exquisite, and the whole process once more became acute. A conservative stand on the question of the injection of any organism by the fly itself seems advisable, inasmuch as the writer has had no opportunity to make a careful study of the living fly from this standpoint, and inasmuch as Georgewitch¹⁴ has reported the finding of a trypanosome in the digestive tract of bloodsucking females of this genus. The histological picture suggests an injected toxin as the ætiological factor in the lesion itself, and there seems no good reason for making the adenopathy a separate process. The fact that the lesion can be reproduced in typical histological detail from alcohol-preserved flies would seem to lend color to the belief that an injected toxine is the exciting cause.

Immunity to the effects of insect bites has been found to vary greatly in different individuals, both in extent and in the rate at which it can be acquired by exposure. The violent reactions occasioned by the poison of the mosquito in Irish and English immigrants, have been noted in the literature by White,¹⁹ Hyde,²⁰ Morse²¹ and others. The susceptibility of foreigners travelling on the Continent to the bite of the flea, the immunity acquired against bee-stings by those frequently exposed, etc., are also well known. That such immunity is a gradual acquisition through life seems very probable (Morse) in view of the notably greater susceptibility of children to insect dermatoses as compared with adults. There are also individuals who have a high degree of immunity to insect bites from early life, possibly even from birth, and who do not react to any marked extent even to the first bites of any particular pest. All these features of this form of immunity have been observed in the

case of the black fly. The immunity of native cattle has long been known. Native human populations enjoy a similar protection. In the writer's own field of observation the native population was little affected, both young and adult. On the other hand the writer and his party, to whom black flies were a new experience, showed all grades of reaction. One member never developed the adenopathy. The writer's two-and-a-half-year-old son who had never been exposed to mosquitoes or flies to an appreciable extent, reacted more violently to the former than to the latter, so far as local manifestations were concerned, and was relatively little affected by either at the end of two weeks. Professor Reighard of the University of Michigan has given it to the writer as his experience that he develops a season's immunity in about ten days, but reacts again, though to a less extent, the following season. Another biologist of the writer's acquaintance is known by his friends never to have shown even papule formation as the result of a fly bite. The painful adenopathy seems to be the first feature of the picture against which immunity is acquired, and few persons are troubled with it after the first two or three weeks. Later the papules cease to pass into a vesicular stage, and finally it is said, no papule formation occurs. High degrees of immunity are usually the result of repeated seasons of exposure, so that the immunity must be cumulative and rather long-lasting. An interesting point already referred to and noted by Williams⁷ in the case of the Norwegian midge, is the fact that the same individual may react to some bites and not to others. The writer himself seemed to develop a local immunity on the neck, and suffered little inconvenience after the first crop, but the lesions on the left arm, acquired later, in most cases went through the full cycle, with all the accompaniments of periodic recurrent pruritus, etc. It is a widely prevalent impression, apparently shared by the people of all regions where the genus *Simulium* is indigenous, that the bite of the fly loses in virulence as the season advances (Riley,¹ Georgewitch¹⁴). Whether this represents a phase of developed immunity in the host or an actual change in the fly's virulence, the writer could not decide. The late season papule is said not to develop for twenty hours or more after the bite and then to remain nodular and deep-seated until its involution.

To the question as to whether the bites of *Simulium venustum* are capable of giving rise to a constitutional reaction in man, the writer is unable to contribute much of value. The temperature in a small child which received twenty-five or more bites in one afternoon, never went above normal, although the lymphadenitis was marked and the child fretful and restless. Several persons have expressed them-

selves as having felt "tired and stiff all over" after being severely bitten by the flies early in the season. Nothing comparable to the severe reactions described in the literature has come under the author's observation.

The histopathological findings and an account of experimental work on the preserved fly will form the second part of this paper.*

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* The second part of this article will appear in the December issue of THE JOURNAL.

EXTERNAL VACCINE THERAPY.*

By HARVEY PARKER TOWLE, M.D., Boston.

THE writer began his therapeutic experiments with external vaccine therapy quite independently. Indeed, it was not known until just before the London Congress of 1913 that Dr. Gilchrist's report upon the general subject of vaccines was to include data obtained from cases treated by external applications.

The writer first used the method in the summer of 1912, in the skin clinic of the Massachusetts General Hospital. The results of tentative experiments were so encouraging in these early cases that the method was used with constantly increasing frequency in both hospital and private practice. The material for this communication has been drawn from personal observation of more than 150 private patients, in whose cases vaccines were used externally. A few hospital cases have been included, because they illustrate certain diseases better.

From the point of view of information to be derived, the cases may be roughly divided into three groups. In one group, the results bear mostly upon the question of practicability; in a second, upon the form of vehicle and mode of administration; in a third, upon the therapeutic indications, the dosage, and the effects.

Before entering upon extended investigation, it was imperative that the practicability of the external method should be determined. Unless it could first be shown that vaccines introduced from without exerted a therapeutic influence in some degree comparable to the known influence of the same vaccines when administered by injection, further study would be fruitless. Therefore, the first point studied in the early period was the effect of external vaccine therapy.

The vaccine-containing preparations manifested their therapeutic activity so abundantly and so consistently that long-continued experimentation was unnecessary to convince the observer that it was practicable to obtain vaccine effects by external methods of administration. The nature of the evidence furnished by this group of demonstration is illustrated by the first hospital case of the present series. The patient was a young man, who, for several years, had suffered from a profuse suppurative and indurated acne of the back. The active lesions were so abundant and the inflammatory zones surrounding them so bright and so broad that the whole back seemed

* Read before the American Dermatological Association, Chicago, Ill., May 14-16, 1914.

covered by an almost unbroken sheet of redness, whose surface was dotted by large and domed elevations and the deep, fibrous scars of previous crops.

Four hundred million staphylococci of a polyvalent stock vaccine and 200,000,000 bacilli of a mixed acne vaccine were incorporated into one ounce of a simple ointment base and applied morning and night, after a preliminary washing of the skin with soap and water. Three days later, the skin was a pale yellowish-white and rather greasy. Hardly a single lesion could be discovered which showed activity and wide-spread inflammation, or which was raised greatly above the general surface level. Nowhere were there any signs of pus formation. Large black comedones, previously masked, were now prominent. The tenderness which marked the eruption preceding, had disappeared.

The second group of cases furnished information which was chiefly applicable to the question of the best form of vehicle to carry the vaccines, and the method of use. It was assumed at the outset that the necessity of reaching the seat of the disease precluded the use, as a vehicle, of any but fatty media. Therefore, having satisfactorily demonstrated the possession of active powers, the relative values of solid and semifluid fats and various combinations of both as ointment bases was the next subject to be studied.

Omitting details, the conclusions may be summarized. Of the ordinary fatty substances, the final selection as ointment bases, alone or in combination, was, in the order of preference: lanolin, vaselin, cold cream, and (for use on the hairy parts) a fat emulsion known as liquid cold cream. Occasionally, one or the other was used alone, but increasing experience gradually led to the more frequent use of combinations.

No fixed formula has been followed. Instead, both composition and proportion have been varied, as the varying conditions in each case seemed to indicate. It may be stated, however, that, in a general way, the simplest formula, plus more or less powder, seemed the most useful in the presence of exudative conditions. In parallel degree to the importance of the exudative condition, the chosen base contains less and less powder, until finally powder is omitted altogether, when dryness becomes prominent and exudate decreases. From this point onward, the effectiveness of the combined base increases steadily until it reaches the highest mark in the manifestations of chronic processes, in which penetration and softening are more important attributes than the power of absorption demanded, at the opposite end of the scale, by exudative diseases. In short, the composition of

the base was varied in accord with the ordinary rules for the use of pastes and ointments.

For pastes, starch was ordinarily the substance added to stiffen the base. For ointments, the greatest satisfaction was derived from varying combinations of glycerin, vaselin, distilled water and lanolin, and of olive oil or almond oil, lime-water and vaselin. On the hairy parts, the use of pastes and ointments is inconvenient and frequently undesirable. As a compromise between the frequent use of a greasy but more or less penetrating salve and the more easily applied but superficially acting lotion, a thin emulsion, with cold cream added to give it more body, has been found to be an efficient means of applying vaccines to the scalp and other hairy parts. At intervals, salves reinforce its lighter action.

Regardless of the form of the base chosen, it has been found desirable that the vaccine preparation should be rubbed in with the fingers until a considerable portion has disappeared, except in the case of an exudative eruption, in which the broken surface of the skin facilitates absorption. In the latter, it suffices merely to smear the vaccine preparation over the surface.

Passing now to the consideration of the conclusions to be drawn from the cases of the third group, it may be said that the indications are that external vaccine therapy is most efficient in the treatment of acute inflammation of infections whose seat is superficial, and therefore easily reached from without. Of all infectious processes, the staphylococcic is the most easily influenced by external vaccine therapy. In this the resemblance to the internal method is exact. Upon other infections the effects of external vaccine treatment are less marked, and in the various forms vary considerably.

Vaccine injections are never more efficient than in the treatment of furunculosis. In these two cases the external method suffers little by comparison. In the first case, a man presented himself with a half-dozen boils on the right upper arm. All had deep-seated, hard, infiltrated bases. The patient was given the following recipe, the preparation to be rubbed in morning and night:

Polyvalent staphylococcus vaccine	400,000,000.
Boric acid	2.
Liquid cold cream	10.
Cold cream	20.

The patient did not reappear, although instructed to return in three days if progress was not favorable.

A second patient had had a series of boils on the right side of the chin. After a series of vaccine injections, none had appeared for a month, the longest interval of freedom that he had had. At the end of the month a relapse occurred and fresh crops continued to appear. The patient was ordered inunctions twice a day of polyvalent staphylococcus vaccine, 400,000,000; boric acid, 2; ichthyol, 1; cold cream *ad* 30. He never came back.

The following case illustrates the effect of the external application of a polyvalent vaccine upon an acute secondary infection of a preëxisting eczema. For two years a bank clerk had had eczema of the hands. Three weeks before his visit the eruption had appeared not only on the hands but on other parts of the body. When seen, the patient was in a pitiful condition from the loss of sleep caused by the burning and tingling of his skin eruption. The backs of the fingers and hands on both sides were fiery red, swollen, crusted, and exuding from beneath many of the crusts. Extensive areas on chin, cheek, forehead and ears were covered by an acutely inflamed, exudative impetigo. Many typical lesions of impetigo occurred in groups scattered over the trunk. After applying a polyvalent staphylococcus vaccine in one ounce of a soft paste, the irritation was quieted and the patient was able to get considerable sleep. Local and general improvement progressed steadily. Seventeen days later, except for one small jagged area, one-half an inch long, on the left cheek, there was no sign of pus. The middle face, the ears, and the hands showed symptoms of a subacute dermatitis. The skin of the body was free from eruption, but there were marked signs of urticaria. The patient commented upon the comfort afforded by the vaccine ointment.

Eight months ago, a prison official was bitten on the right hand. A small dry patch appeared in the palm, which spread gradually, undermining and loosening the epidermal layer as it went, leaving behind a raw, oozing surface, overhung by a flap of loosened epidermis, attached only at its outer edges to the tissue beneath. As time went on, the process spread gradually, extending peripherally and healing centrally, until the outer limits of the palm were involved. For the past two or three months the patient had been taking antisyphilitic remedies, which a physician had prescribed, but with no benefit. A combination ointment base containing 400,000,000 mixed staphylococci of a stock vaccine to a total 30 grams of the ointment was used, in combination with 1 gram of boric acid and 2 grammes of calamine. In five days the exudate had been displaced by desquamation. In eighteen days the patient was discharged. There has been no relapse.

In a case of extensive sycosis of two years' duration, involving the bearded face from one side to the other, to a fluid fatty preparation of 100 cc., 200,000,000 of a stock staphylococcic vaccine was added. Ten days later, it was noted that the progress had been excellent. The burning sensation had been promptly allayed; new pustules had been prevented and old eliminated; the skin was smooth; and the previous swelling had disappeared. The most prominent symptom remaining was a narrow zone of redness surrounding individual hairs of the beard, and pigment stains of past lesions. When last seen, six weeks after the beginning of external vaccine therapy, no traces of the preceding sycosis were visible to the ordinary observer.

A man of 56 had had an eruption of psoriasis for ten years, which, among other sites, occupied the crests of both buttocks above the gluteal fold. During the course of treatment, both buttocks had become the seat of an acute dermatitis, which extended to the very bottom of the fold. As a result of insomnia induced by the intensely severe subjective symptoms, the patient was going to pieces. Under ordinary measures, temporary relief was obtained, which was later succeeded by an exacerbation of symptoms and an extension of the process forward to the scrotum. Sleep was said to be impossible. On account of the exudate and the acuteness of the inflammatory process it was thought wise to combine 400,000,000 of a polyvalent staphylococcus vaccine in a paste of 30 grammes in total. Thirteen days later, the patient reported that he had not had an uncomfortable night since using the vaccine salve.

An artist of high-strung, nervous temperament and of unlimited ambition had worked for five years at top speed, with no vacation. A condition of acute dermatitis, with a considerable element of urticaria, had developed upon a long-existing facial seborrhœa. For months, stated conditions of quiet and storm had alternated. During exacerbations, sleep was interrupted by frequent paroxysms of itching, which none of the many remedies tried, with or without medical advice, seemed to relieve. An external application containing staphylococcus and acne vaccines was prescribed. The effect was prompt. The patient reported that complete ease and relief followed the application within the next five minutes. Three days later, the face appeared normal.

The acne vaccine was seldom used without the staphylococcus vaccine, on the ground that it was probable that, in most instances, the acute symptoms of inflammation in seborrhœic affections were less the result of the mild acne bacillus than of the omnipresent pus

germs. It was thought that if the staphylococcus vaccine did no good, it at least would do no harm. In the following case, 100,000,000 of mixed acne vaccine was used, without the staphylococcus vaccine, in 100 cc. of a fluid fat containing in addition 2 grammes of boric acid and 0.5 gramme of euresol. An elderly woman had been treated by a "system" for two years for the relief of falling hair. Toward the end of the period the scalp had shown signs of rebellion, which, however, had been ignored. Soon there developed an impetiginous seborrhœa, which invaded the entire scalp, with disastrous results. Under nine days' use of a lotion and salve, the objective symptoms had declined, but at the expense of an aggravation of the subjective symptoms. Consequently, the treatment was changed to a fatty emulsion of a volume of 100 cc., which contained 2 per cent. boric acid, $1\frac{1}{2}$ per cent. euresol, and 100,000,000 bacilli of the acne vaccine. The relief was prompt. In one week all tendency to swelling, exudate and pain was gone.

The following case illustrates well the usual effects of the combined acne and staphylococcus vaccines upon the oily seborrhœa of the scalp. A woman of over forty, in very poor general health, complained of an abnormal loss of hair. Examination showed abundant collections of fatty crusts and epithelial débris, as well as a very pronounced alopecia. For a year the treatment was attended by alternating conditions of improvement and exacerbation. Finally, there was prescribed for use, twice during the first week and thereafter once each week, 100 cc. of a fatty emulsion containing a polyvalent staphylococcus vaccine (400,000,000) and a mixed acne vaccine (100,000,000). One month later the patient volunteered a statement to the effect that she had never seen a preparation as efficient as this. Three months later it was reported that for one month nothing had been done, yet the condition of the scalp was better than it had been for months.

In contrast to the favorable action of the vaccine application on the alopecia of oily seborrhœa is the lack of results in the treatment of the alopecia accompanying the dry, flaky scaling of pityriasis.

On the smooth skin the result was similar. A man of 46 presented a muddy, thickened, greasy skin, upon which were many large, inflammatory acne abscesses, acne papules and comedones. Little progress was made until an ointment was given containing a polyvalent staphylococcus vaccine and a mixed acne vaccine. Thereafter, improvement was rapid. The suppurative lesions disappeared. The symptoms of inflammation ceased. For some time after the skin

was thickened and greasy, but eventually cleared up. In a large majority of the cases the first symptom to disappear was the redness; the second, the muddy tint of seborrhœa. A young girl of 16 sought treatment for a very oily skin, with numerous inflamed and non-inflamed comedones, and a sparse number of acne papules. The use once a day for ten days of an ointment containing the mixed staphylococcus and acne vaccine (400,000,000 of the first and 100,000,000 of the second) had reduced the oiliness very markedly.

The results of external vaccine therapy on the superficially seated lesions of impetigo were usually excellent. A young boy who had suffered from an impetiginous process of the hands and forearms was discharged well within four weeks after a staphylococcus vaccine had been prescribed. A young man with a wide-spread impetigo of buttocks and thighs, after three days' external application of staphylococcus vaccine, was more than ninety per cent. well.

Four cases of psoriasis were empirically treated by external vaccine applications. Two cases of inveterate psoriasis showed no sign of response. On the other hand, two acute recurrent outbreaks of guttate psoriasis, both of which had followed severe attacks of tonsillitis, were seemingly very favorably affected. In one case, great improvement was noted, which, however, was soon followed by a second recurrence. In the second case, the profuse guttate eruption practically disappeared within a month.

The effect of tuberculin ointments was irregular. In a case of erythema induratum, there was relief from pain and a slight improvement of the objective symptoms, such as an increased tendency toward healing of the ulceration and toward general resorption of the whole lesion, for a few weeks, when, having apparently lost its force, the tuberculin ceased to have an effect.

Tuberculin ointments (0.1 gramme: 30 grammes) seemed to act more vigorously in lupus vulgaris, and to be effective for a longer time, than in erythema induratum.

Two cases of lupus vulgaris were treated by tuberculin, applied externally in ointments, with good effect. In the first case, the disease was limited to the left side of the tip of the nose, the extreme outer portion of the left nasal vestibule and adjoining rim of the ala, and the upper lip below the orifice. The nose and lip were intensely red and greatly swollen. At the outset for two or three weeks, heliotherapy was the sole method of treatment. During this period improvement was marked by a reduction of all the symptoms. The discharge from within the nostril grew steadily less; the redness decreased; the nose and lip grew smaller. Discouraged by continued

adverse weather conditions, the patient was given an ointment, to one ounce of which one milligram of Koch's tuberculin *alt* had been added. This was massaged in freely morning and night. The response was immediate and improvement was resumed. Whenever the weather favored, sun exposures were given. Under the combined methods of external tuberculin therapy and heliotherapy, the rate of progress was more rapid than with either method alone. When circumstances forced a complete cessation of all treatment, the nose presented an almost normal appearance. Just below the outer angle of the floor of the nostril was an area of diseased tissue about the size of a French pea, the only visible trace remaining. The lip was of normal thickness.

In the second case, the tuberculous disease was manifested by a single round area, about as large as a nickel, outside the angle of the mouth, on the left cheek. The process was deep-seated, firm and infiltrated. Several nodules were secondarily infected by pus germs and were tender, swollen, and elevated above the general level. On incision, a considerable amount of pus and pultaceous tissue was evacuated. An ointment base containing 0.01 gramme of tuberculin and (on account of the secondary infection) 400,000,000 polyvalent staphylococcus vaccine was ordered to be applied, withunction, twice a day. Within a week, a smart local reaction occurred, which manifested itself by a primary increase in the redness, followed by swelling and, twenty-four hours later, abundant, closely crowded vesicles of small size, with contents of clear serum. The escaping fluid from the easily ruptured vesicles dried into a large crust, greatly exceeding in breadth the surface of the diseased skin beneath. When the reaction had quieted and the overlying crust had been removed, the lesion seemed to extend less deeply into the tissues beneath, the infiltration to be less marked and firm, and the previous tenderness to have grown less severe. The tuberculin staphylococcus ointment has been applied since then but twice a week, a boric-acid ointment filling in the intervals. The time which has elapsed is too short for judgment of the result.

Tuberculin, 0.01 gramme, was used in ointment form combined with 200,000,000 bacilli of a stock mixed-acne vaccine in the treatment of four cases of lupus erythematosus. All were cases of multiple lesions, situated on various parts of the face and scalp. The types varied. In two, there were the more acute symptoms of a brighter and pinker redness, of an extensive œdematous infiltration beneath the lesions and in the tissues adjacent, and of pronounced tenderness on pressure. In this form, none of the lesions was large,

some, indeed, being not larger than the head of a pin, and atrophy was not a prominent feature. On the other hand, the lesions were very numerous.

The effect of the tuberculin-acne ointment on this type was surprising. Tenderness was relieved, in one case almost entirely, in the other case greatly. The swelling diminished, entirely in one case and partially in the other. The previous menacing aspect of the bright-red, swollen lesions was replaced by an appearance of dull inactivity. In one case, in which the number of lesions exceeded the others greatly, the plaques showed a steady retrograde process. Many of the larger patches showed nothing but a broken row around the margin of small pea-sized, slightly roughened and slightly scaling patches. The rest of the previously diseased area presented a nearly normal skin, except for a dingy color suggesting the last stage of a bruise prior to final disappearance. When last seen, the patient reported that a few fresh pinhead-sized lesions had developed since her previous visit in the near vicinity of older and now seemingly involuting patches.

One case was characterized by large, disseminated patches of lupus erythematosus, nearly uniformly of a diameter of about two inches. In this patient the greatest number of patches occurred on the right half of the scalp. A few were to be found on the left side of the scalp, and two high up on the right cheek near the ear. This case resembled the preceding one in that tenderness was a prominent and an embarrassing symptom in its limitation of therapeutic endeavor. Unlike the first case, atrophy was the leading feature of the patches, with smaller islets of persisting disease enclosed. In this case the tuberculin-acne ointment reduced the tenderness to an almost negligible point. The redness and general intensity of the other symptoms were influenced favorably, but only to a degree so low as to make the elimination of tenderness the dominating feature of the result.

The fourth case combined features of the other three. On the one hand, the multiple lesions were highly congestive and excessively tender. On the other hand, they were atrophic and extended farther downward into the tissues. The result of the use of the tuberculin-acne ointment was not satisfactory. Although at first it seemed to produce a lessening of the tenderness and of the general intensity, the improvement did not continue and the treatment was abandoned.

Finally, there remains to be mentioned a case of extensive involvement of the entire bearded face by the trichophyton megalo-*sporon*. From ear to ear the skin presented a continuous swollen

mass of rounded, grape-sized tumors, exuding a glairy fluid mixed with pus, covered with a stubby growth of hair and thick, matted crusts. An ointment containing in each ounce 30 grains of boric acid and 800,000,000 staphylococci of a stock polyvalent vaccine was massaged into the skin twice a day, and, spread upon a cloth, was bandaged on. The result was that within twenty-four hours the secretion had decreased seventy-five per cent., and within forty-eight hours had practically ceased. After ten days, the vaccine ointment was used at night only, an ointment of carbolic acid and sulphur replacing the morning application. In less than four weeks from the time of beginning the external vaccine treatment, the patient showed nothing but a single area of dry, rather thickened, scaling skin about one inch wide.

DISCUSSION.

DR. GRINDON said that about three years ago he saw a woman, the wife of a colleague, with a lupus of the face of twenty-five years' standing. Various sorts of treatment had been resorted to, which only improved or modified the condition temporarily. Acting on the theory that anti-bodies were largely produced by tissues in close proximity to the invading organism, and that the latter in lupus were perhaps too few to excite sufficient anti-body production, Dr. Grindon decided to use the full-strength Morro ointment, which he applied twice weekly, rubbing it in for ten minutes, limiting it exactly to the lower half of the patch. The treatment was followed by quite a decided improvement within the area treated, which continued for several weeks. After that the surface took on fresh activity, whereupon the patient ceased coming.

DR. ZEISLER, speaking of remarkable cures, recalled a case that came to the clinic and in which the diagnosis was rather uncertain. He finally came to the conclusion that it was a case of pityriasis rosea which had become aggravated by artificial applications. He instructed his assistant to prescribe a mild application, and under the use of borated vaseline, the lesions entirely cleared up. The speaker said he could also recall a number of cases of lupus erythematosus discoides cured by simple applications. The same was true of many cases of infantile eczema. What conclusions were we to draw from such cases? Merely that there were many factors that entered into the question, and that no general conclusions could be drawn as to the value of this or that particular method of treatment. In the cases reported by Dr. Towle the energetic rubbing might have been a factor in the beneficial results that were obtained.

In these remarks, Dr. Zeisler said, he had not the slightest desire to criticise the work done by Dr. Towle with the external use of vaccines; on the contrary, he admired his energy and enthusiasm, and would gladly try the method when a suitable opportunity presented itself.

DR. TOWLE, in closing, said that the series of cases he had reported showed that this method of treatment was undoubtedly of some value. There was no doubt that the external application of these vaccines produced some effect; just how much action they exerted when applied in this way he was not yet in a position to say, but he considered the method well worthy of further trial.

A CONTRIBUTION TO THE AUTOSEROTHERAPY OF CERTAIN DISEASES OF THE SKIN.

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IT is undeniable that the fresh autogenous serum, injected intravenously into the body as soon as it is obtained, exerts a remarkable influence upon those types of dermatoses which are essentially due to extreme hypersensibility of the skin to external agencies. This observation is exemplified in one of our patients, a case of *hydraa aestivale*, in whom the autogenous serum was used and who began to improve after the second injection. After five injections, each of 15 cc., were given, the lesions healed, leaving the patient in excellent condition. Since then, nearly a month has passed without any evident manifestation or relapse.

In the forms of dermatoses due to metabolic disturbances, psoriasis for example, the autoserum alone is not capable of bringing about spontaneous regression of the lesions. The use of a local reducing substance is therefore always necessary. The action of the serum in this group of dermatoses may be due to two factors: either a sensitization of the psoriatic foci to the reducing effect of local medication, or a reduction of the sensitiveness of the skin to endogenous irritations, as suggested by Spiethoff.¹ The first contention is based on the fact that after a series of injections with autoserum, the psoriatic patches become more amenable to local treatment than before the patient is subjected to serum treatment.

In those dermatoses which are supposedly of nervous origin, the autoserum alone exerts spontaneous healing, as was shown in our case of *lichen planus*, which was cured after six injections of varying dosage, from 20 to 40 cc., and in which no other medication was used. The same result was obtained in our cases of *dermatitis herpetiformis*, which were especially remarkable for their chronicity and their rebelliousness to any method of treatment to which they had been subjected. After two injections of autoserum, the itching in all of them was profoundly influenced. In case 2, it completely disappeared after the second injection, and in the case 3, after five

injections. In case 4, the itching appeared to be slowly influenced; it was a very chronic case and the subject was addicted to alcohol.

Healing is accomplished by a number of injections which vary in each case, different doses being used for each of them. In case 3, eight injections were given at weekly intervals, with doses varying from 15 to 35 cc., administered at the same intervals as in the preceding case; and in case 4, six injections, from 20 to 45 cc. at a dose.

We have submitted also, to this method of treatment, a case of epidermolysis bullosa (?), one of pruritus cutaneus, and another of X-ray ulcer. The first was undergoing a certain degree of improvement, after only three injections, but owing to certain difficulties, the patient could no longer come to the clinic, so that the treatment was discontinued. In the second, an adult woman, who had already reached the menopause, the condition of pruritus failed to respond to the treatment. The trophic symptom, in this case, was most likely due to local stagnation of toxic products somewhere in the body, perhaps in the uterus, since practically it was not performing its functions, throwing, therefore, upon the skin an increased amount of work in an attempt to get rid of noxious substances which normally should be disposed of through the uterus. Von Heuck⁵ believes that it is the retention of the common salt in the tissues of the skin that is responsible for the itching, while Spiethoff² connects the pruritus with derangements of the gastrointestinal tract. At any rate, the store of toxic debris, in our case, may have been so heavy that the amount of serum injected was by far insufficient to bring about an abatement of the clinical symptoms. In the case of the Roentgen ulcer, there was another condition to contend with, namely pulmonary tuberculosis, which evidently was responsible for the cachectic condition of the patient, and indirectly contributed to the evolution of the ulcer which was primarily caused by the actinic rays. Though it is not possible to establish a definite conclusion in this case, owing to insufficient treatment, we believe the ultimate result would have been very doubtful, as there existed a fairly advanced bacillary disease acting as a deterrent to our therapeutic efforts.

To better understand the method of our treatment, the evolution of the lesions and the process of healing, with its incidents, we transcribe, in detail, the histories of our cases. The clinical material was derived from Dr. Wise's service at the Vanderbilt Clinic.

CASE 1, HYDROA FESTIVALE. J. G., 10 years old, male, white, American. Present illness dates back five years; it comes "on and off," with exacerbations in the summer and partial subsidence in the beginning of fall, and in winter it

would undergo complete, yet temporary healing. The lesions consisted of pitted vesicles scattered haphazard over the surface of the exposed parts of the body, namely the face, both hands and portions of the forearms. Many lesions showed a single hæmorrhagic spot at the centre; a large number were impetiginous; some were serous with an umbilicated hæmorrhagic summit; few were scropurulent, others entirely purulent. There were flat scars intermingled with the fresh lesions. They involved with apparent predilection, the dorsum of the hands and of the fingers, the sides of the neck, the face and ears. Five years ago the patient had a mastoid operation, and since then the actual condition developed. Itching was present.

June 5, the patient was given intravenously 20 cc. of autoserum. June 12, he was again given 25 cc. of autoserum; improvement began; itching relieved. June 19, was given another 25 cc. of autoserum; improvement was remarkable; no reaction at all. June 26, had another injection of 25 cc.; almost cured; few fading lesions only remain on the right hand; itching is gone. July 3, the last injection (25 cc.) of autoserum was administered. Patient has fully recovered; all lesions are healed. Patient never had reaction throughout the course of treatment.

CASE 2. DERMATITIS HERPETIFORMIS. G. N., 29 years of age, female, married, white, non-alcoholic. Family history, negative. Previous diseases: had an attack of diphtheria when she was four years old; had bilateral tonsillitis when seven years old; and shortly after this, had another attack of diphtheria; had also whooping cough and measles in the following years; at the age of fifteen years, was operated on for adenoids; had typhoid fever three years ago. Present illness started twelve years ago at the back of the neck, just at the level of the second cervical vertebra, and gradually spread over the rest of the body. It began as a sort of heat-rash occurring in clusters, which itched tremendously, and soon developed into papulo-vesicular lesions. The vesicles, when ruptured by scratching, exuded a thin, serous fluid, and as a rule, all of the lesions were marked by hæmorrhagic, irregular excoriations. There was no inflammatory reaction on the part of the surrounding skin that was visible clinically. The distribution was as follows: back of the neck, back, thighs, arms, axillæ, legs, scalp, lobes of both ears, chest and buttocks. The face, feet and hands were free. The lesions were symmetrical in their outbreak.

March 17, the patient received intravenously 12 cc. of autoserum. March 24, again received 15 cc.; itching on the back has disappeared; no reaction appeared. March 31, had 18 cc. of autoserum; the vesicles on the arms and on the back are partially cleared up; the right arm is almost free. No reaction. April 7, was given 15 cc.; eruptions on the back, arms and extremities are much better; itching entirely vanished from the regions just referred to. Over the back of both ears a crop of vesicles broke out; much itching of the scalp. April 14, received 19 cc. of auto-serum; eruptions on the arms are entirely cleared up; that on the back, markedly improved. Patient developed eczema seborrhæicum on the scalp and back of the left ear. April 22, was given 20 cc. of autoserum; itching has disappeared entirely all over the body; eczema of the scalp and ears improved. April 28, was given another injection of 20 cc. Patient failed to report for two weeks, and during this time she has been indulging in sweets and coffee, and developed a slight relapse; so that the treatment was resumed vigorously. May 12, again another injection of 25 cc.; no change. May 19, was given 30 cc.; relapsing eruption, much improved. Habit of scratching interfered with healing. May 26, was given 40 cc.; very much improved; only very few lesions still remain over the scapular regions. June 2, another dose of 40 cc. was administered; eruptions on the back and arms are gone; a group of lesions on the right hip did not respond to treatment. So an ointment of 5 per cent. sulphur was prescribed exclusively for that region. June 9, was given the last injection, with 45 cc. of autoserum; patient is cured.

AUTOSEROTHERAPY OF DISEASES OF THE SKIN 783

CASE 3. DERMATITIS HERPETIFORMIS. F. K., 45 years of age, male, married, white, American, laborer by occupation, moderately alcoholic. Family history, unimportant. Present illness is of 15 years' standing; the lesions are papular, vesicular and pustular in type, and symmetrical in distribution, with tendency to develop in groups. They are seen on the anterior aspects of both shoulders, on both scapular regions, on both acetabular regions, on both sides of the intergluteal fissure, on the external aspect of both thighs, on both sides of the neck and at the junction of the hair and skin of the nucha. Patient complains of moderate itching, especially at night time, when he puts on light clothes. Has been treated before, for a long time, without definite improvement.

April 22, the patient received the first injection of 15 cc. of autoserum. Two days after the injection, he was annoyed by terrific itching. April 30, was given 18 cc. of autoserum; more crops appeared. May 7, was given 25 cc. of same; itching was considerably diminished; eruptions are healing. May 11, was again given 20 cc.; lesions on the acetabular regions are cleared up; there is still slight itching. May 28, was given another 20 cc. of autoserum; lesions over the scapular regions are far better. Itching comes on once in a while. Patient said he is feeling much better. June 4, was given 25 cc.; condition of the skin, as a whole, is very much improved, and no evidence of new crop is noticeable. Lesions on both hips are entirely faded; those on the scapular regions are practically healed. Patient asserted his itching is completely relieved. June 10, had 30 cc. June 16, had another injection of 35 cc., which was the last; the lesions have cleared up altogether, leaving a brownish pigmentation of the skin. Patient's general condition is excellent.

CASE 4. DERMATITIS HERPETIFORMIS. M. M., 40 years of age, female, widow, white, Irish, heavy drinker. Family history, negative. Present illness began 15 years ago. For seven years it appeared to be cured, after being treated; then it came on again. It is attended by intense itching. The distribution of the lesions is symmetrical; they are papular and vesicular in type, and are, as a rule, excoriated. They are situated on the external aspect of both arms, in both armpits, on both scapular regions, on the outer aspect of the left thigh, on the inner side of the right thigh, on both legs and feet.

From May 18 to June 16, was given five injections, each of 25 cc. The fifth injection was marked by almost complete healing of the lesions and diminution of the itching. On June 25, was given the last injection; lesions are all gone. This case is one in which the autoserum treatment alone caused spontaneous healing of the eruption.

CASE 5. LICHEN PLANUS DISSEMINATUS. L. M., 28 years of age, male, married, white, Russian, moderate drinker. Family history, negative. Previous diseases: had suppurative urethritis 4 years ago, which was successfully treated. Present illness started three months ago; it first broke out on the feet, then spread upwards to the thighs, abdomen, back and chest. The lesions are numerous, consisting of shiny, slightly elevated papules, varying in size from a pin-head to a pea; they are especially numerous over the chest, abdomen, back and thighs. The mucous membrane of the left cheek shows two similar lesions. Several papules of the same character are also seen on the glans penis. The present condition was treated previously, without being influenced. Urinalysis negative.

From May 27 to June 6, three injections of 20 cc. of autoserum were given, at weekly intervals. At the time of third injection there was slight fading of the lesions. No reaction is reported. On June 20, another injection of 40 cc. of autoserum was administered; now the papules are markedly flattened out. On June 27, was given the last injection of another 40 cc. of autoserum; at this time there is a complete regression of all of the papules, and brownish pigmentation

was left. Patient is in a very healthy condition. This case represents an example of spontaneous involution following autoserum treatment.

CASE 6. PSORIASIS. M. P., 23 years of age, male, single, white, American, non-alcoholic. Family history, negative. Previous diseases: in childhood had measles. In 1904 had an attack of acute appendicitis for which he was operated. Venereal diseases denied. Present illness: a year ago he noticed a pinkish, opaque, slightly elevated spot, the size of a pin-head, on the back of the left elbow, which would not annoy him, except in cold weather, when moderate itching would be felt at the site of the lesion. The latter gradually enlarged becoming scaly. Shortly after this, he noticed another spot on the opposite elbow. At present the lesions are multiple and scattered over the extremities, the largest measuring 4 x 3 cm. They are irregular in outline, moderately raised, and their surfaces, salmon-colored, dull and dry, are capped with silvery scales. The distribution of the lesions is as follows: back of both elbows, both thighs and legs, and the auricula of both ears. Urinalysis negative.

From March 7 to April 1, 100 cc. of autoserum were injected intravenously, at weekly doses of 15 cc. After the last dose, 1% ung. chrysarobin was prescribed, and on May 6, patient reported cured.

CASE 7. PSORIASIS. S. R., 38 years of age, male, married, white, Austrian, non-alcoholic. Family history is unimportant. Previous diseases, negative. Venereal diseases are denied. Present illness started 13 years ago, as a pin-head patch on the right side of the chin, with itching; then gradually generalized all over the body. For six years has been continuously treated in several institutions, but he affirmed that his condition remained uninfluenced. On March 28, the patient was put under the autoserum treatment, injecting him with 25 cc. at the first dose. On April 11 he was given another 15 cc.; the patient had malaise, weakness and headache within 24 hours after the treatment. On April 18 had another injection of 15 cc. On April 25, he again was given 20 cc. On May 5, after an injection of 20 cc. of autoserum, the patient began to use 2% ung. chrysarobin. On May 16, was given another injection of 25 cc.; the lesions are much improved; the use of the chrysarobin was continued. On May 23, one more injection of 20 cc. of serum; the lesions on the body are gone; those on the legs are very much improved. The serum treatment was discontinued, and only the use of the chrysarobin ointment was continued for one week more, when the involution became complete.

CASE 8. PSORIASIS. J. H., 16 years of age, male, single, white, American. Family history is negative. No history of venereal diseases. Present condition: the present illness dates back six months. The lesions are profusely scattered all over the body, including the face and scalp; they are irregular in outline and vary in size from 1 to 6 cm. in diameter. The only subjective symptom is itching. Urinalysis, negative.

After three injections, each of 15 cc. of autoserum, the patient began the use of 2% ung. chrysarobin. May 7, the patient was given 20 cc. of autoserum; many patches have faded, leaving a brownish pigmentation of the corresponding parts; itching is checked altogether. May 14, was given 25 cc. again; face is freed of the eruption; lesions on the back and on the arms are very much improved. May 28, had one more injection of 20 cc.; improvement of the remaining lesions is rather slow. June 4, had again another injection of 20 cc.; a few small patches still persist over the back. June 10, was given another 20 cc.; the face, scalp and the abdomen and legs are free. No new lesions have broken out so far. June 18, was injected 10 cc.; psoriatic lesions are now only represented by flat, brownish, smooth areas; over the back, however, are still a few more patches, which are somewhat rebellious to the treatment. The improvement is very remarkable.

CASE 9. PSORIASIS CIRCINATA ET PUNCTATA. S. L., 25 years of age, male, single, tailor by occupation, white, Austrian. Family history shows that one uncle and one cousin of his have a disease of the skin which is not unlike his present disease. No history of venereal diseases. The present illness started ten years ago on the left arm; the opposite arm soon became involved, then the back of the ears, chest, back and legs, and at present the lesions cover the entire body, except the face. Over the back and chest the lesions show a circinate contour, as a rule, there being punctiform ones as well. For two years he has been subjected to local treatment, which in the patient's opinion did not help him at all.

The patient was given autoserum treatment since April 14. After two injections of autoserum, the local treatment began with 2% ung. chrysarobin. On April 30, was given an injection of 15 cc. of autoserum. May 14, he was given another injection of 25 cc.; there is considerable improvement; many lesions on the arms and buttocks have cleared up. May 26, had another injection of 25 cc.; while many lesions faded, a new crop broke out over the abdomen and left hip; there is moderate itching. June 2, had 20 cc.; the lesions over the abdomen barely responded. June 10, was given 40 cc. of autoserum; itching subsided; fading is much pronounced. June 16, was again given 30 cc.; this was followed by considerable improvement; no evidence of recurrence is noticed so far. June 23, an injection of 40 cc. of autoserum was administered, which was the last one. At this time, the psoriatic plaques have gone, leaving slight mottling of the skin. No subsequent dermatitis was ever present, as a result of the local application.

CASE 10. PSORIASIS DIFFUSA. W. G., 36 years of age, male, married, white, Russian, laborer, non-alcoholic. Family history is unimportant. The present illness has existed for two years; it covers extensive areas of the abdomen and of the back, and occurs in plaques of varying size over the rest of the body. The largest psoriatic area measures 20 cm. in its greatest diameter, projects 1.5 cm. from its base. The present condition is accompanied by burning sensation and itching. He complains also of insomnia and general debility, because of the itching.

April 28, the patient had the first injection of 15 cc. of autoserum. On May 5, was given another injection of 20 cc. On May 12, another injection of 20 cc.; the patient started to use 2% chrysarobin ointment. May 19, had an injection of 25 cc. of autoserum. On May 23, another injection of 20 cc.; at this time a remarkable improvement is noticed; the centres of the lesions have undergone rapid involution; itching and burning sensation are checked. The patient feels stronger and sleeps well. On May 29, again another 20 cc. of autoserum was administered; the improvement is more pronounced; the lesions over the abdomen and on the back are cleared up to a great extent. June 6, had an injection of 20 cc.; fading of the lesions is far advanced. The patient has gained in weight and feels much stronger. The itching has definitely disappeared. After three more injections, each of 45 cc., all the lesions have entirely disappeared, leaving the skin perfectly smooth in appearance.

CASE 11. URTICARIA. R. B., 53 years of age, female, married, white, German. Present illness began three weeks ago, attended by severe itching. The lesions vary in size from that of a pea to a dollar, and affect the arms, face, especially the forehead, back of the neck, inner side of both knees and the buttocks. She had local treatment, which relieved itching temporarily.

On May 2, was given 15 cc. of autoserum. On May 9, was again given 25 cc.; the itching is now diminished. On May 16, had an injection of 30 cc. On May 23, another injection of 25 cc.; the itching still persists, but much reduced in its intensity. On June 14 was given an injection of *inactivated serum*; in the following 24 hours the patient developed an acute exacerbation. On June 13, had 40 cc. of fresh serum, and the itching was again relieved, with some fading

of the exanthem. On June 20, an injection of 40 cc. of fresh autoserum was administered. The patient is improved.

CASE 12. CHRONIC URTICARIA. M. P., 22 years of age, male, single, tailor, white, German; has no venereal history; takes coffee moderately; bowels move regularly. The present illness commenced fifteen months ago. Urticarial lesions are scattered over the buttocks, arms, especially numerous on both legs. Dermographism is associated with the disease. On May 15 was placed under autoserum treatment. The itching was relieved after the second injection, and the patient continued to get better, until the fifth injection, when the eruption entirely disappeared, as well as the itching.

CASE 13. EPIDERMOLYSIS BULLOSA. A. S., 23 years old, male, married, white, German. Has no history of venereal diseases. The present illness developed two years ago; the epidermis is very delicate and bleb formations followed even gentle rubbing of the skin. The only subjective symptom is debility. Has been treated before, but failed to improve. On January 28th, the patient was put under the autoserum treatment. After the second injection he reported that he felt stronger. At the third injection the general condition underwent some improvement. For certain reasons the treatment was discontinued.

In all of our cases we used only the fresh, autogenous serum, and in none of them a mixture of the homozygic and heterozygic sera as Linser and Spiethoff did with some of their cases.

In none of our patients could we observe even a slight reaction, except in case 7, which, within 24 hours after the injection was given, developed headache, debility and general malaise; this occurred only once, after the patient had received three previous injections of his own serum, while the rest of the treatment was borne uneventfully.

In the cases of psoriasis, the use of chrysarobin, 2%, began immediately after the second injection of the autoserum in some cases, and after a course of six injections in others. We obtained the same results from both methods, only in the first group of cases healing began earlier than in the second.

We also treated with the *inactivated* serum a case of urticaria, (No. 11) which, within 24 hours subsequent to the injection, developed an exacerbation of the exanthem and the itching. An injection with *active* or fresh serum of the same patient produced an abatement of both the itching and formation of papules. This fact seems to suggest that the *desensitizing* body of the serum is thermolabile, its thermostability being manifested at the temperature of 56° C.: that the inactivation of the serum not only destroys the desensitizing bodies, but the substance which is capable of resisting the reducing action of the heat, not only is not capable of relieving pruritus, but also decreases the amount of desensitization of the skin produced by previous autoserous treatment.

The leucocyte count, investigated before and after the injections were given, remained almost uninfluenced, with the exception of one

or two cases, in which a slight increase of the total number of the leucocytes appeared within twenty-four hours after the injection. Changes in the percentage of each leucocytic type have also been found, but these variations are so irregular that it is impossible to derive from them a definite conclusion, so far as the action of the serum upon the individual leucocyte is concerned. It should be emphasized, however, that in the majority of instances the injection of the autoserum seems to have caused a slight reduction of the total number of the leucocytes, as is shown in cases 2, 3, 7, 10, 11, 12, 13 and 14 (see Table I); whereas in cases 5 and 8, instead of mild leucopenia, a moderate increase of the total number of the leucocytes toward the normal rate has taken place; this can be ascribed to the presence of a few blood cells and of a small amount of fibrinous precipitate in the serum which was injected previous to the counting. After treatment with inactivated serum, Spiethoff has detected a slight hypoleucocytosis. Our findings, in connection with this point, are therefore compatible with those of Spiethoff, with the only difference that we have used a *fresh* serum, instead of the inactivated one.

In regard to the possibility of the injection of autoserum being capable of rendering a production of antibodies in the blood of the patient submitted to it, we have carried out a series of tests to determine the antigenic action of the autoserum, by testing the serum of the patient after the latter was given a course of injections of autoserum, and see if the serum alone may be able to fix the complement.

Our results are negative as far as complement-binding anti-bodies are concerned. We, however, have found out the presence of an excessive amount of hæmolytic amboceptor, in such quantity as 0.075 cc. of the serum, which was quite enough to bring forth complete hæmolysis in the presence of 0.5 cc. complement. The serum used in this test was previously inactivated at 56° C. for a half hour. A set of five tubes containing increasing quantity of serum is arranged, and 0.5 cc. of guinea-pig serum (1 to 10) is added to each tube. After an hour's incubation, 0.5 cc. of 5% sheep's red blood cells is added to each tube. After being properly shaken, the tubes are placed back in the water bath at 37° C., and a half hour later, a reading is made. The amount of hæmolytic amboceptor varied in the different cases, as is shown by Table 3. The control is obtained from a perfectly healthy individual, anamnesically, clinically and serologically; it failed to lake, in as much as 0.2 cc., in the presence of the complement alone.

Of course, the fact that the normal serum contains a certain amount of natural amboceptor was borne in mind in this experiment,

and it is not very unlikely that the sera of our patients are charged with an exaggerated stock of natural amboceptor; but on the other hand the intensiveness of the hæmolytic power of the amboceptor found in the sera in question, the regularity of its detection in all of the cases submitted to the test, its rather increased amount, the contrasting evidence shown by the control—all these lead to the conclusion that an extra amount of hæmolytic amboceptor is present in the sera tested, and that autogenous serotherapy is probably responsible for such hæmolytic antibodies.

Our technique, similar to Spiethoff's, consists of bleeding a cubital vein through a McCrae needle, which is perfectly sterile, and the blood is collected into a 50 cc. glass container, likewise sterile. The amount of blood so collected is kept in a cool place until it is clotted; then, with a sterile pipette, the clot is separated from the wall of the glass container, properly stoppered with sterile cotton, and placed in the electric centrifuge, revolved at a speed of from 3,000 to 4,000 revolutions per minute, according to circumstances. At the speed of 3,000 revolutions, a clear serum can be obtained after 15 minutes centrifugation. At the speed of 4,000, the same result is produced at the end of five minutes. In case of emergency, we utilize the full speed; otherwise, the low speed, as a rule, is preferred. Through a glass syringe of 30 cc. capacity, previously sterilized, and connected with a sterile rubber tube with proper adjustment for the needle, the serum is decanted slowly, so as to avoid stirring of the sediment. When decantation is complete the syringe is held vertically, the column of air contained in the rubber tubing is thoroughly expelled, and the serum is injected intravenously through a salvarsan needle.

The infusion should be slow, and the syringe should not be completely emptied, to prevent the injection of the column of air between the base of the piston and the surface of the fluid into the circulation. A repose of five minutes is advised immediately after the injection. The injections are given once a week, intravenously.

In the preparation of the serum we usually spend an hour or an hour and a half, from the time the blood is collected until the serum is restored to the patient.

The scheme of having the blood duly coagulated previous to centrifugalization affords a two-fold advantage: a larger amount of serum can be obtained, and the possibility of mechanical hæmolysis is nullified, which, in the case without previous coagulation, usually would occur at the speed of 3,500 revolutions. It happens quite often that when the coagulation of the blood is not complete and

the centrifugalization is done at high speed, the serum so obtained would appear *tinged*, thus indicating that the blood has undergone a certain amount of mechanical hæmolysis. Now, though the intravenous injection with such a tinged serum has proved, in our hands, to be perfectly innocuous, yet for the therapeutic purposes for which we are striving, any degree of hæmolysis should be avoided as thoroughly as possible.

The "ideal" serum, for our therapeutic purpose, should be clear, light greenish-yellow, free from flocculent or shreddy precipitates, which are fibrinous, as a rule, and when injected into the body, it should not increase temperature. At times the serum may appear charged with chyle, when it becomes opaque, the degree of its capacity being in proportion to the amount of chyle suspended. This happens when the patient has taken a heavy meal before being bled. A serum, in such condition, can be administered intravenously without risk.

Observing strictly aseptic measures we have been able to rule out, in the course of our treatment, any untoward incident of whatever sort. Even the injection of serum mixed with a certain amount of red blood cells has shown, in several instances, an innocuous effect, and in none of our cases did we encounter the clinical disturbances pointed out by Mayer and Linser,⁶ namely cephalalgia, anxiety, tachypnœa, general malaise, albuminuria with casts.

What are the true indications for autoserotherapy? Let us quote Spiethoff: "All those dermatoses which, in the course of treatment, develop an especial susceptibility for chemical substances, and their healing, therefore, is fraught with considerable difficulties, are amenable to this form of therapy."

Our experience shows us that autoserotherapy should be resorted to, not only in those cases in which, owing to special hypersensibility for chemicals, their healing is inhibited, but also in all dermatoses of nervous, metabolic or actinic causation, which prove to be rebellious to chemical treatment.

Spiethoff^{3, 4} reported successful results in prurigo Hebra, dermatitis herpetiformis, chronic urticaria, psoriasis, eczema rubrum et madidans, catarrhal angina with fever, prostatitis with peripheral infiltration, ulcer molle gangrænosa and suppurative inguinal lymphadenitis.

On the other hand, Mayer and Linser⁶ also have reported remarkable success from the use of the *exogenous* human serum from a pregnant woman in toxæmias of pregnancy and dermatotoxæmias concomitant with the gravid condition.

Rubsamen⁷ has reported a case of prurigo gestationis and another of herpes gestationis, cured with fresh serum from a normal pregnant woman.

Fieux and Dantin⁸ found an efficient remedy in intractable vomiting, in the use of serum from the normal pregnant woman.

Bennecke⁹ claims that the mixture of normal sera, obtained from several absolutely healthy donors, exerts a powerful therapeutic effect in serious cases of sepsis, of which he reported a case of streptococcal angina lacunaris, a case of typhus and three cases of scarlet fever.

Franz¹⁰ has utilized with striking success, the serum of the blood collected aseptically from the umbilical cords in a number of deliveries, in a case of exudative polymorphous erythema in pregnancy.

Freund¹¹ has used with very good results, the horse serum in the treatment of eclampsia and pruriginous polymorphous erythema and uncontrollable vomiting.

Gottheil¹² reported six cases of psoriasis, three cases of eczema and one of leprosy, which were treated with autoserum, with very satisfactory results.

While Mayer⁶ ascribes to psychological influence the striking success that is obtained from autoserum therapy in certain dermatoses, Abderhalden, Freund and Pinkussohn think that it is due to a fermentative effect. Spiethoff, on the other hand, maintains that it is the property of the autoserum to decrease the excessive sensibility of the skin in certain conditions that is responsible for this wonderful result. Mayer tried to prove his contention by injecting plain sterile normal saline solution into the patient, instead of serum, but the results he obtained failed to conform his view. Spiethoff's assumption is based upon his clinical findings. Lately, in addition to his view, he maintains that *desensitization* thus produced is not only confined to the skin, but it also exerts its influence upon the whole organism.

It is indeed very likely that ferments are developed in the serum, either in the interval between the withdrawal of the blood from the body and the restoration of the serum to it, or after the injection of the autoserum. That this ferment commands an antigenic power, is strongly suggested by the extraordinary amount of hæmolytic ambocceptor in the sera of all of the individuals which were treated with the autoserum. That it is not capable of giving rise to any definite reaction, is shown during the course of treatment, by the lack of the increase of temperature, headache, etc. That it has no positive chemotaxis for the leucocytes, is demonstrated by Table

No. 1, in which the leucocyte count, made before and after the treatment is given, shows the lack of influence, in that way, upon the white blood cells. That such a hypothetical ferment is endowed with antipruritic property, is made evident by the relief of itching after two or three injections of the autoserum.

It is not therefore a mere effect of suggestion that accounts for the concealed virtue of the autoserum, but a serological process, in which ferments probably play the principal rôle. Whether such a process is specific or not, remains to be determined. Spiethoff, however, thinks it holds no definite specificity, but it is only ephemeral, being neutralized by the secretions and parenchymatous substances of the body. We assume that only biochemical investigations may throw light upon this problem.

CONCLUSIONS.

1. The autoserum alone is capable of producing spontaneous involution of certain dermatoses, especially those of actinic and nervous origin, and also those which have proved to be rebellious to chemical medication.

2. As an antipruritic agent, the autoserum is an excellent remedy.

3. The autoserum plays a very active influence in the treatment of psoriasis in the way of reducing the resistance of the psoriatic tissue, thereby rendering it more apt to be acted upon by the chrysarobin, in weak percentages.

4. That 2% or 3% Ung. chrysarobin is enough to produce a complete desquamation of the epithelium involved in the areas of psoriasis, in combination with the autoserum treatment.

5. Owing to the low percentage of chrysarobin necessary to bring about healing, the possibility of producing secondary dermatitis, in psoriatic patients, is practically ruled out.

6. While the autoserum, when it is aseptically and properly prepared, gives rise to no clinical reaction, it is capable of augmenting the hæmolytic amboceptor in the serum from the individual into whom it is injected.

7. The use of chrysarobin is not necessarily to follow a determined number of injections. The earlier the application of the ointment, the faster the healing of the disease.

The writer desires to express his obligations to Prof. John A. Fordyce for the privilege of working in the Department of Dermatology, Columbia University, and for the use of the material in the Clinic.

He wishes, also, to thank the Chief of Clinic, Dr. George M. MacKee, for his valuable suggestions and criticisms, and Drs. Fred Wise and Charles Wood McMurtry for supplying material and aiding in the laboratory work.

TABLE I.
BLOOD COUNT BEFORE AUTOSERUM INJECTION.

Case No.	Dermatitis herpetiformis. 2	Dermatitis herpetiformis. 3	Lichen planus. 5	Psoriasis. 7	Psoriasis. 8	Psoriasis. 10	Psoriasis. 11	Urticaria. 12	Urticaria. 13	Pruritus cutaneus. 14
Small lymphocytes..	8.5	16.0	10.5	15.0	12.0	9.0	33.0	21.0	2.5	20.0
Large lymphocytes..	10.0	6.5	10.0	11.0	14.0	20.0	9.0	5.0	7.0	9.0
Large mononuclear..	4.5	6.0	7.1	9.0	10.6	4.0	1.5	3.5	8.0	2.0
Transitionals	6.5	3.5	5.7	6.0	5.3	6.0	2.0	2.0	2.0	2.5
Polymorphonuclear..	66.5	67.5	64.5	58.0	53.3	58.0	53.5	65.5	78.0	62.5
Eosinophiles	4.0	0.5	1.4	2.0	2.6	3.0	1.0	3.0	2.5	4.0
Basophiles	0	0	0	1.0	2.0	0	0	0	0	0
Leucocytosis	9,200	6,300	5,600	8,600	5,000	9,360	12,160	11,000	8,600	6,800

TABLE II.
BLOOD COUNT AFTER INJECTION.

Case No.	2	3	5	7	8	10	11	12	13	14
Lapse of time (hrs.)	25	12	20	12	12	10	19	19	20	20
Small lymphocytes..	27.0	18.0	19.0	3.3	11.5	5.2	12.5	3.0	21.0	19.0
Large lymphocytes..	7.0	15.5	12.5	10.0	17.0	34.2	6.5	10.0	12.4	15.5
Large mononuclear..	2.5	4.0	2.5	15.3	9.0	15.7	6.0	7.5	4.1	7.0
Transitionals	1.5	4.0	1.5	5.3	5.5	12.2	4.5	1.5	0.4	2.0
Polymorphonuclear..	58.0	67.0	62.5	65.0	53.5	36.8	69.0	73.0	59.9	53.0
Eosinophiles	4.0	2.0	2.0	1.3	3.0	0.6	1.5	4.0	1.3	3.5
Basophiles	0	0	0	0.6	0.5	0	0	0	0	0
Leucocytosis	7,100	5,000	8,100	6,600	6,400	10,900	9,100	8,900	8,300	4,600

TABLE III.

Case 2. Duhring's disease; 299 cc. of autoserum were injected intravenously in 12 sessions, weekly.

Amount of serum.	Result in 10 min. incubation.	Result in 30 minutes.
0.075 cc.	Partial hæmolysis.	Complete hæmolysis.
0.1 cc.	Marked hæmolysis.	Complete hæmolysis.
0.15 cc.	Complete hæmolysis.	Complete hæmolysis.
0.2 cc.	Complete hæmolysis.	Complete hæmolysis.

Case 8. Psoriasis; 185 cc. of autoserum were injected intravenously in 9 sessions, at weekly intervals.

Amount of serum.	Result in 10 min. incubation.	Result in 30 minutes.
0.075 cc.	No hæmolysis.	Slight hæmolysis.
0.1 cc.	Slight hæmolysis.	Marked hæmolysis.
0.15 cc.	Slight hæmolysis.	Complete hæmolysis.
0.2 cc.	Marked hæmolysis.	Complete hæmolysis.

Case 3. Dermatitis herpetiformis; had 188 cc. of autoserum injected intravenously in 8 sessions.

Amount of serum.	Result in 10 min. incubation.	Result in 30 minutes.
0.075 cc.	Slight hæmolysis.	Marked hæmolysis.
0.1 cc.	Marked hæmolysis.	Complete hæmolysis.
0.15 cc.	Complete hæmolysis.	
0.2 cc.	Complete hæmolysis.	

AUTOSEROTHERAPY OF DISEASES OF THE SKIN 793

Case 1. *Hydroa aestivale*; 120 cc. of autoserum intravenously injected in 5 sessions.

Amount of serum.	Result in 10 min. incubation.	Result in 30 minutes.
0.075 cc.	Partial hæmolysis.	Complete hæmolysis.
0.1 cc.	Marked hæmolysis.	Complete hæmolysis.
0.15 cc.	Complete hæmolysis.	
0.2 cc.	Complete hæmolysis.	

Case 12. *Urticaria chronica*.

Amount of serum.	Result in 10 min. incubation.	Result in 30 minutes.
0.075 cc.	Slight hæmolysis.	Complete hæmolysis.
0.1 cc.	Marked hæmolysis.	Complete hæmolysis.
0.15 cc.	Marked hæmolysis.	Complete hæmolysis.
0.2 cc.	Complete hæmolysis.	Complete hæmolysis.

Case 17. *Urticaria chronica*; 148 cc. of autoserum injected in 5 sessions, at weekly intervals.

Amount of serum.	Result in 10 min. incubation.	Result in 30 minutes.
0.075 cc.	No hæmolysis.	Partial hæmolysis.
0.1 cc.	Slight hæmolysis.	Complete hæmolysis.
0.15 cc.	Marked hæmolysis.	Complete hæmolysis.
0.2 cc.	Complete hæmolysis.	

Control.

0.075 cc.	No hæmolysis.	No hæmolysis.
0.1 cc.	No hæmolysis.	No hæmolysis.
0.15 cc.	No hæmolysis.	No hæmolysis.
0.2 cc.	No hæmolysis.	No hæmolysis.

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CLINICAL REPORT.

HERPES ZOSTER FOLLOWING ARSENIC.

By R. C. FINLAY, M.D., Grace, Miss.

THIS case is reported for the clear connection between arsenic used locally and the incidence of herpes in the adjoining region.

The patient was an adult male, white. He consulted a dentist for a carious tooth, the upper left lateral incisor. It was necessary to kill the nerve in the tooth, and arsenic was used for this purpose. The cavity was sealed temporarily as usual. This operation was on Aug. 30, 1913.

Aug. 31, 1913. Pain in tooth; swelling of cheek; pain in left side of neck that night.

Sept. 1, 1913. Pain became so great that the cap was taken out of the cavity. This lessened the pain in the tooth. The face was now greatly swollen. The skin of the cheek and side of neck presented a deep-red, thickened surface with a few small vesicles. There was tenderness everywhere, especially over the mastoid.

Diagnosis, herpes zoster or possibly rhus poisoning (the latter being prevalent here at the time).

A dressing of ichthyol and glycerine was applied; later, this was changed for a meal poultice which gave more relief. Morphine became necessary.

Sept. 2, gradual spread. Sept. 3, 1913. Eruption complete. The affected area was bounded by a line from point of chin to top of ear; top of ear to median line, curving downward; down median line to level of base of neck; forward in an irregular line to the median line in front; thence up to chin. There was great pain now. Vesication general over the entire surface. The vesicles were small, a few coalescing. Temp. $99^{\circ}\frac{2}{5}$ F. Vesicle fluid sterile.

Sept. 4, 1913. Less painful. Sept. 5, 1913. Fluid in vesicles turbid. Sept. 6, 1913. Gradual improvement. Most of the pain is now in the temporal region.

The temperature never was much elevated. Healing was slow. Pain was constant, and after 6 months there remained neuralgic reminders. Later, aspirin was used occasionally for the pain. Iron and small doses of arsenic were used as a tonic.

CORRESPONDENCE.

IMPRESSIONS OF A RECENT VISIT TO SOME EUROPEAN CLINICS.

Letter from DR. JOHN A. FORDYCE.

To the Editor:

BEFORE leaving New York in June, I promised to write my impressions of some of the European clinics which I intended to visit during the summer of 1914. The great war which has involved almost the entire Continent was then a distant possibility and it is difficult for me now to realize that all scientific activity has suddenly ceased.

I left Hamburg on the morning of July 6th and reached the Naval Hospital at Kiel-Wik about 9:30 A.M., where Oberstabsarzt Gennerich, with whom I had previously arranged an interview, received me very cordially. He showed me his large service, his method of administering salvarsan and talked with much enthusiasm of his success in curing syphilis. His results in the treatment of syphilis during the past three or four years have been published in various German Journals and have attracted the favorable attention of syphilographers in many countries. His connection with the Naval Hospital at Kiel affords exceptional opportunities to observe the results of treatment now employed and to compare them with those which followed the older plan.

Before the advent of salvarsan the number of relapses in his practice averaged about forty-five per cent. In the past three years, with combined salvarsan and mercury therapy, they have steadily decreased until now they number only four per cent. He has observed about twenty cases of reinfection in the past two years in patients subjected to the intensive treatment which he planned and systematically carries out.

In primary syphilis with a negative Wassermann reaction he gives six injections of salvarsan with the following intervals: the first four every five days, the fifth after seven days and the sixth after seven to eight days. Intramuscular injections of calomel, 0.05 to 0.07, are begun at the same time and continued until twelve to fifteen are given. This course usually suffices to sterilize the patient in the primary stage. In older cases of primary syphilis a second course of salvarsan may be needed. In secondary syphilis he precedes the salvarsan course by four to six calomel injections at six day intervals, then a rest of from twenty-eight to thirty-three days and a second course of salvarsan and calomel. In later periods of the secondary stage a third course of salvarsan, after a rest of six weeks, is frequently required.

He regulates the dose according to the body weight and condition

of the patient, giving to men from 0.3 to 0.45 gm., and to women 0.15 to 0.3 gm. He never gives 0.6 gm., as he considers it near the toxic limit. He seldom uses neosalvarsan, except at times to women, or where a mild effect is desired.

Dr. Gennerich has made a large number of examinations of the spinal fluid and finds pathological changes in primary syphilis in 13 per cent., in secondary in 21 per cent., in tertiary with positive Wassermann in 49 per cent., and in latent syphilis with positive serum in 33 per cent. He punctures all latent cases with positive serum reactions, as only in this way can the possibility of involvement of the nervous system be excluded.

The intraspinal treatment is employed by him in tabes and other forms of syphilis of the nervous system, but on account of the technical difficulties and lack of facilities to carry out the Swift-Ellis method, he uses neosalvarsan directly after dissolving it in physiological salt solution. The doses he now employs are very small, from a quarter to one or two milligrams, at intervals of from two to five weeks, until five to six injections have been made, then a longer rest period because of the possibility of irritative symptoms.

Dr. Gennerich impressed me as a very careful and conscientious worker, with much enthusiasm and devotion to the cure of the patients who come under his care. His statement that he could always change a positive Wassermann to negative in latent syphilis seemed to me somewhat too optimistic, after the experience which we have had in New York. He believes firmly in the importance of freshly distilled water, which should contain no organic or inorganic impurities. Such substances lead to chemical decomposition of the drug and to symptoms of arsenic poisoning. Any additional work thrown on the kidneys by acute intercurrent illness of whatever nature prevents the prompt elimination of salvarsan and adds to the danger of toxic symptoms. The majority of fatalities following the drug, in his opinion, are due to technical errors and to overdosage. In syphilis of the nervous system he thinks antibody formation in the spinal fluid, as a result of this or other infections, may antagonize or prevent the development of spirochætæ. For this reason, the use of tuberculine to stimulate antibody formation has been suggested.

My next visit was to the neurological service of Professor Nonne at the Eppendorf Hospital in Hamburg. The hospital is a large and important one, containing about twenty-four hundred beds. It is made up of a large number of separate buildings or "stations" which are surrounded by trees and flowers in wonderful profusion.

Professor Nonne has a service of two hundred and forty beds which he visits daily and devotes several hours to the careful examination and treatment of his patients. He remarked to me that, in his opinion, the present time was not a favorable one for syphilitic patients, as the new remedies had not been tested for a sufficiently long time for us to be

sure of the correct method of using them, while the older ones were more or less neglected. His service is made up chiefly of nervous and alcoholic patients, and includes many cases, of course, of syphilis of the nervous system. The enormous experience which he has had in this class of patients made the visit one of especial interest to me, as one can place implicit confidence in any statement which he makes. In chronic alcoholism, he stated that one may find small, sluggish or irregular pupils as well as absent knee-jerks. One should therefore be extremely careful in prognosticating tabes from these signs alone, especially if the spinal fluid findings are negative. Nonne occasionally sees early tabes with the four phases negative, but only makes this diagnosis after careful exclusion of alcoholism.

He demonstrated a patient with one fixed pupil, one absent knee-jerk, both Achilles jerks absent, and all four phases negative. He made the diagnosis of tabes as the patient was non-alcoholic.

Another interesting case was one of brain tumor with facial paralysis complete for involuntary movements, partial for voluntary movements. Hemiplegia was present on the same side with hemianopsia. The four phases were negative. Pressure of the fluid was 600 as compared with the normal of 120. Headache was absent.

He had observed many cases of monorecidives in syphilitic patients treated with salvarsan, but this is not to be wondered at, as such cases seek the neurologist and occur in the practice of physicians who fail to advise or carry out a systematic plan of treatment.

I was interested in the demonstration of the absence of the nystagmus reflex in a case of labyrinthine disease. Hot water irrigation to the ear drum produces nystagmus in the absence of labyrinthine disease. In this case the trouble developed one and a half years after syphilis, but was uninfluenced by salvarsan or mercury. A case of multiple sclerosis, in a girl of twenty, with primary optic atrophy was shown me. Nonne would make a positive diagnosis if the abdominal reflexes and Babinski were present. In this patient the Babinski was absent, but in spite of this he thought the case one of early multiple sclerosis. He is disposed to attribute the affection to a variety of spirochætæ because of its analogy to syphilitic sclerosis.

A young girl of fifteen with paresis, the mother of a seven-months-old child, also interested me very much, as the case illustrated the possibility of the transmission of syphilis to the third generation. The father of the girl gave a positive Wassermann, the mother's was negative; the child born of the parietic mother also gave a positive Wassermann.

In paretics and tabetics other members of the families are examined when practicable, and 60 per cent. show positive serum reactions. Nonne thinks from five per cent. to ten per cent. of syphilitics develop positive disease of the nervous system. He is now treating his cases of nerve syphilis, especially tabes, intraspinally in the following manner:

An ampoule containing 0.045 gm. of neosalvarsan is dissolved in

3 cc. of freshly removed spinal fluid. Of this solution two decigrams are added to 12 to 15 cc. of fluid contained in the barrel of a luer syringe, which is allowed to mix thoroughly, then the syringe is elevated and the mixture enters the canal. The amount of neosalvarsan given is 3 milligrams, and this is repeated at three week intervals. The patients complain of pain for a day or two. He has had no case of bladder paralysis or acute tabes in cases so treated. As to results, he is not yet in a position to make positive statements. Nonne is very conservative in expressing an opinion as to the benefits to be obtained in the treatment of syphilis of the nervous system by salvarsan, because he thinks the method is too recent, and furthermore, he sees many tabetics who improve spontaneously or under mercury therapy. In using the latter, he prefers innunctions to intramuscular injections. He is open-minded and willing to be convinced of the advantages of the newer methods, but is not carried away by over-enthusiasm.

Geheimrat Dr. E. Lesser, Ordentlicher Professor of Dermatology in the University of Berlin, has a well-equipped clinic in the Charité with beds and out-door service. His lecture room is well constructed and lighted for the demonstration of patients to the best advantage. As a result of government aid and private donations, he has equipped an excellent light institute under the care of Dr. Zehden, which is supplied with a number of large Finsen lamps, Kromayer lamps, and an elaborate X-ray department. Keloid of the face was being treated by an arc light reflected by a concave mirror and red glass screen. The therapeutic result was from the heat alone.

Tuberculous ulcers and fistulae were treated by "Hohen Sonnen Licht," a powerful mercury-vapor electric lamp with concave mirror. The results obtained were excellent. Among the cases demonstrated was one of acute generalized lupus erythematosus with high temperature, a case of leucoderma post psoriasis, which developed independent of treatment, and a case of lichen planus of the vulva. Microsporon infection is very seldom met with in Berlin. Professor Lesser was very courteous and was much pleased to receive direct word from his chief of clinic, Professor Arndt, whom I had recently seen in Atlantic City. He very kindly asked me to attend the meeting of the Berlin Dermatological Society, which was held in the Policlinic building in Ziegelstrasse. I was glad to avail myself of the opportunity and met there many of the well-known dermatologists, including Dr. O. Rosenthal, the presiding officer, Professor Heller, Dr. Pinkus, Dr. Ledermann and others. The meeting was a clinical one and was conducted much as our own. Dr. Isaac showed me a case of psoriasis of the tongue with concomitant lesions of the body. It recalled to me a similar case which was under my care at home.

Dr. Rosenthal, after the meeting, gave me an interesting account of a home for hereditary syphilitic children, which was founded three or four years before at Friedrichslagen, near Berlin. The home has a

capacity for thirty children, who have the best hygienic surroundings and care as well as the most approved treatment. After three years' care and treatment, a number of little patients have been discharged cured and promise to become useful citizens. Dr. Rosenthal, Professor Blaschko and Professor Heller are much interested in this sociological experiment. A similar institution exists in Stockholm under the care of Professor Welanders.

On the following day I called on Professor Wechselmann at the Rudolph Virchow Hospital, and was kindly received by him. His experience in the treatment of syphilis by salvarsan is greater than that of any one. He emphasizes the great importance of careful examination of patients before treatment, especially as to the functional activity of the kidneys. In pregnancy one should be doubly cautious because of the increased work of these organs.

He believes the combination of mercury with salvarsan to be dangerous, and says syphilis can be cured with the latter drug alone. He seldom gives mercury, as he considers salvarsan more efficient, and furthermore, he wishes to study its effects without other complicating factors. He employs intravenous injections of old salvarsan, but in children and in women with poor veins he uses epifascial injections of neosalvarsan, dissolved in a small quantity of salt solution. By proper insertion of the needle, and previous use of salt solution to insure its correct position, these epifascial injections cause little pain or infiltration. He has lately been using a preparation of old salvarsan, in which the alkali is added to the formula in the making. This powder is readily soluble and acts exactly as old salvarsan. Its advantages is the ease of preparation.

Wechselmann does not limit himself as strictly as Gennerich to moderate-sized doses, but frequently gives the full amount—0.6 gm. Every patient is punctured when the Wassermann reaction begins to change. He prefers to see a gradual change from positive to negative, as quick changes from positive to negative and again to positive have little therapeutic or prognostic significance. He emphasizes the great importance of the first course of treatment in influencing the final cure. Nervous system development with symptoms in early syphilis occurs in about eight per cent. of the cases. He thinks cases properly treated in early stages and controlled by lumbar puncture will escape involvement of the nervous system. The contraindications to the use of salvarsan are few, if the size of the dose and intervals are carefully regulated. The daily quantity of urine of patients treated is measured, and its careful examination frequently made.

I reached Breslau July 16th, and spent a very pleasant and profitable week, thanks to the generous hospitality of Geheimrat Neisser and Professor Foerster.

The clinic of Professor Neisser is well organized and conducted, and the visitor is impressed with the time given by the head of the department to the administration as well as to the clinical work.

Many of the leading continental dermatologists received their training with Neisser. These include such men as Arning of Hamburg, Jadassohn of Berne, Klingmüller of Kiel, Herxheimer of Frankfort, Juliusberg of Posen, Jacobi of Freiburg, Meirowski of Dresden, Zieler of Würzburg and others.

Next to the Baretta collection in the St. Louis Hospital, Paris, the moulages made by Kroener at the Breslau clinic are the most remarkable. They are all original reproductions, and include many usual as well as rare dermatoses. I saw no reproductions of blastomycosis, but many of the various types of sarcoma. The collection was exceedingly rich in cutaneous syphilis.

The clinic building contains 120 beds, a very complete out-door service, with an elaborate light installation, equipped with Finsen and Kromayer lamps, "Hohen Sonnen Licht" and Roentgen apparatus. I was impressed with the large number of cases of lupus and severe epithelioma which were under treatment. Neisser has a large quantity of mesothorium and is giving it an extensive trial in epithelioma. It is used in quantities of 20 to 60 milligrams, in receptacles 4 cm. square. Filtered through aluminum screens, it is kept in contact with the disease about 15 hours, after which a decided reaction is produced. This may persist for several weeks before it is safe to repeat the application.

Thorium X, a watery solution of mesothorium, is used with lanoline or with propyl alcohol, applied directly to the area to be treated. Thorium X is also used intravenously in leucoplakia and scleroderma as a solution of 1,000 units in 10 cc. of salt solution or distilled water.

The Wassermann laboratory, which is conducted by Fräulein Stern, with two women assistants, is a very active department of the clinic, frequently as many as a hundred reactions being made daily. From five to eight cholesterin antigens are employed for each serum. All cases under treatment are carefully controlled both as to blood and spinal fluid. Neisser has had little success in provoking a positive reaction in latent syphilis. In this regard he differs with Gennerich, Milian and with my own experience. In certain cases of late latent syphilis with a positive serum reaction, he has found it impossible to influence it by treatment. His experience here coincides with that of Lesser. Nonne and many others who now no longer treat syphilitic cases indefinitely because of a persistent positive Wassermann. Such cases are individualized and examined for evidence of cardiac, vascular or nervous manifestations.

Neisser employs auto-serum in psoriasis and other obstinate skin affections. He has had the best results in dermatitis herpetiformis.

Professor Foerster, in charge of the neurological service in Breslau, showed me his interesting collection of pathological preparations. He had a spinal cord showing typical sclerosis of the posterior columns, from a patient aged seventy, with well-marked arterio-sclerosis without history of syphilis and with negative blood and spinal fluid. The pa-

tient, before death, had Argyll-Robertson pupils, absent knee-jerks, bladder disturbance and areas of anæsthesia. He had never before seen a case in which syphilis could be excluded. He further demonstrated several brains showing an unusual condition which has not been described. The pathological process, in his opinion, begins as a meningo-endarteritis and leads, by a chronic progressive course, to multiple areas of softening, giving the cortex a worm-eaten appearance. Large bullæ with clear fluid are seen on the surface, while deeper in the brain, hæmorrhages are sometimes found. The cerebro-spinal fluid during life gives a positive Wassermann with moderate cell increase. Epileptiform attacks and progressive mental decay characterize these cases clinically. In paresis, he resorts to brain puncture in cases of doubtful diagnosis, and claims that plasma cells about the capillaries differentiate true paresis from the so-called pseudo variety. He uses the Unna-Rapenheimer stain, which reveals the plasma cells very clearly. In cases of early tabes, which accidentally come to autopsy, a similar perivascular plasma cell infiltration is seen.

Professor Foerster is a very industrious and conscientious worker, and is accumulating a large amount of most interesting pathological material from his nervous cases. He is treating his cases of tabes and paresis by the Swift-Ellis method, with excellent results. He prefers this method to the direct use of neosalvarsan as employed by Ravaut, Nonne and others.

I reached Berne about the time of the outbreak of hostilities, and consequently found the various medical services in a state of confusion and disorganization, as many assistants as well as the heads of the departments were German and had been called to the colors.

Professor Jadassohn was discharging patients from his wards as rapidly as possible, so they could be enrolled in the Swiss army that was rapidly being mobilized. He very kindly showed me the interesting cases in his service, which included one of generalized exfoliative dermatitis in a patient with lymphatic leucæmia. He is now treating his cases of lupus erythematosus with thorium X, with excellent results. Mesothorium, from which thorium X is derived, is a by-product in the manufacture of incandescent gas mantles, and is obtained from the Auer Gesellschaft in Berlin. Thorium X is an unstable liquid, and must be freshly made, as it rapidly deteriorates. An ointment containing one thousand fluid units to one gram of lanoline is applied to the surface affected, for twenty-four to forty-eight hours. It is then removed and repeated, if necessary, after an interval of three weeks. Professor Jadassohn's interesting collection of moulages and cultures of ring-worm and other fungi were shown at the National Exposition which was held this summer at Berne. In the same hygienic building, Professor Kolle's exhibit of vaccines and sera, and Professor Burri's fine collection of pathological specimens obtained from diseased animals at the Berne slaughter house, were noteworthy.

The municipality of Berne has constructed a slaughter house which is in every way a model one, and has in connection with it a school of veterinary medicine, of which Professor Burri is the director. It enjoys the distinction of being the only one in which veterinary medicine is taught.

Dr. Hoffman, of our own country, who is now working with Professor Kolle in the Hygienic Institute of the University of Berne, very kindly showed me the research departments of the Institute, as well as the methods they employ in making vaccines and sera. In their large commercial department, these therapeutic agents are prepared and shipped to India, China, Africa and other parts of the world. The horses used in obtaining diphtheria and other sera are the finest that can be procured. Professor Kolle contends that broken-down animals do not yield reliable or active agents of this kind.

Not the least interesting event of my stay in Berne was the opportunity to meet and enjoy the hospitality of Professor Kocher and his son, and to see their method of operating on the thyroid. Although Professor Kocher is seventy-two years old, he is very active and operates many hours daily at the Insel Hospital and in his private clinic. He is perhaps Berne's most distinguished citizen and is honored like Ehrlich by a street bearing his name. He has twice received the Nobel prize for his remarkable work on the thyroid.

I remained in Berne until mobilization was completed, and then went to Paris and London. My trip through France was one of much general interest, as movements of large bodies of troops were constantly taking place and railway travel was necessarily slow. In the region about Amiens I saw a great many French and English soldiers on their way to the fighting ground about Mons. The English troops were everywhere greeted with enthusiasm, and both seemed happy that they were soon to be a part of the great battle.

In London, the chief medical activity was confined to the Army Medical Corps. My friend, Major French, who is attached to the Rochester Row Hospital, very kindly showed me the method of treating syphilis in the hospital and the work of the Army Medical School. On the outbreak of hostilities, the supply of salvarsan in England was promptly commandeered by the Government. Because of its scarcity, soldiers affected with syphilis are given one dose of 0.6 gm., followed by gray oil in one grain doses at weekly intervals. After two months of these injections, the combined salvarsan and mercurial course is repeated if the Wasserman reaction continues positive. Much emphasis is laid on the intramuscular injections of gray oil, since this method of giving the drug was introduced in the army medical practice by Colonel Lambkin.

The modern Army Medical School was built after the Boer war, at a cost of £150,000, and is used for the instruction of the Army Medical Corps. Post-graduate instruction of nine months' duration is given.

during which time the officers live in the building, which has the features of a luxurious club as well as lecture rooms and well-equipped laboratories. The one for research work in hygiene is said to be the most modern in Europe. The fine library, halls and mess room are decorated with animal heads and many interesting weapons obtained in the Colonial wars. In another room I saw a very interesting collection of water-color drawings depicting the deeds of valor of the medical officers who obtained the Victoria cross. This decoration, which is made from the bronze cannon captured in the Crimean war, is the highest honor a British officer can receive for bravery. It is naturally much esteemed, and establishes the reputation of its recipient for his life.

Previous to my departure for home from Liverpool, I visited the school of Tropical Medicine, which is now a part of the University. The school has a capacity of about thirty students, who are given courses of three months' instruction. Research workers are welcomed. The chief diseases seen in the Infirmary, which has only recently been built, are dysentery, malarial fevers, beri-beri, and occasionally sleeping sickness.

Professor J. W. W. Stephens gave me a very interesting account of a ship from the Far East, on which thirty cases of beri-beri were found. The food supply of the ship was investigated and found to consist chiefly of rice and dry fish all of which was in bad condition. The cases were rapidly cured by proper food. Professor Stephens stated that beri-beri is readily controlled by alcoholic extracts of the pericarp of legumes. The same observation has been made in acute beri-beri in children.

The museum contains interesting collections of guinea worms, poisonous snakes, specimens of Madura foot and many tropical insects which are carriers of disease. I also saw a tropical plant called the itch bean, the needles of which cause such intense pruritus as to make life almost unendurable. The construction of the Uganda railroad was temporarily stopped by the intense suffering produced by contact with this plant.

I also wish to express my appreciation of the courtesies shown me by Dr. Stopford Taylor and Dr. McKenna during my short visit to Liverpool.

I regret that my letter to you is so disjointed and fragmentary, and that it covers other fields of work than pure dermatology. You may, however, consider it worth while to publish it, because of the universal interest in all that pertains to the war zone.

Very sincerely yours,

J. A. FORDYCE.

SOCIETY TRANSACTIONS.

NEW YORK DERMATOLOGICAL SOCIETY.

Regular Meetings, Apr. 28 and May 26, 1914.

JOHN A. FORDYCE, M.D., *President*.

XANTHOMA DIABETICORUM. Presented by Dr. MacKEE for Dr. FORDYCE.

The patient was a widow, 53 years of age, born in Germany. She was from Dr. Wise's service at the Vanderbilt Clinic, and showed lesions on the elbows, knees, and back of the neck. She had diabetes, and was referred to the dermatological clinic by the Department of Internal Medicine. During the past six years she had had four separate eruptions of this kind. The condition displayed at the meeting began two months ago. It consisted of a large number of pin-head to split-pea sized, hemispherical, raised, salmon-colored, glistening, indurated papules. Some of the papules were composed of a single pin-head-sized lesion; others, of an aggregation of from two to seven of these small lesions, which showed a tendency to coalesce. The lesions were situated chiefly on the extensor surfaces of the elbows and forearms, on the back of the neck, and above the knees; some were above the ankles. A few scattered lesions were on the fingers and back of the hands. The patient weighed 172 pounds. She had had ten miscarriages and three children. One of these died of consumption. She was to have a Wassermann test, and a further report of the case would be submitted.

DISCUSSION.

Dr. HOWARD FOX agreed with the diagnosis of xanthoma diabeticorum. He thought such a case should be distinguished from cases of ordinary xanthoma tuberosum multiplex which happened to be associated with diabetes, and in which the lesions showed no tendency to disappear. Such a case he had shown at the International Congress in New York. He wished to know whether the disappearance of the eruption in this case was coincident with the disappearance of the diabetes.

Dr. SHERWELL said that many years ago he had shown two or three cases of this condition—just before or about the time that Dr. Robinson had published an article on the subject. Dr. Robinson and he had treated one case together, which was the one upon which the article was based, and this paper was read before the International Congress in 1890. The sugar was detected in these cases and he (Dr. Sherwell) had first directed attention to these particular cases where the lesions appeared on the anterior and prominent portions of the body—the buttocks, etc., causing pain upon sitting down. Two of these patients were women and one was a man. The women had distinct diabetic trouble, but this was not so pronounced in the man. The man was a distinguished advocate in Brooklyn, and was presented before this Society one night. At first only slight evidence of sugar was detected; he had diabetes and died of diabetic gangrene a few years ago, having lived twenty years after the first symptoms. The lesions went down to some extent, but never disappeared entirely. These cases were very interesting, but were not very amenable to treatment, and never disappeared entirely. Dr. Robinson made a very exhaustive study of them and made biopsies, and wrote a very interesting paper about them.

Dr. WINFIELD asked Dr. Sherwell whether there were tumors present on the patient referred to, at the time of his operation.

DR. SIERWELL replied that he could not say. The man abandoned treatment for the tumors and did not seem to suffer in his general health on account of them, and made a jest of them.

DR. JACKSON said that this was not the ordinary "xanthoma diabeticorum." The lesions were redder than those of the more common form. As to the use of the terms xanthoma and xanthelasma, he was under the impression that both the yellow patches on the eyelids and the yellow tumors that occurred elsewhere were the same disease, and therefore he could see no use in employing two names. He had recently seen a case in which both the lids and the elbows showed the lesion—one plane and one tuberos.

NODULAR IODODERMA. Presented by DR. MACKEE for DR. FORDYCE.

The patient was a woman of 52, who had been under the observation of Dr. Wise at the Vanderbilt Clinic. She was a syphilitic. She presented a palm-sized, deep-seated nodule or tumor on the outer surface of the left thigh. The overlying skin was inflamed. There was very little pain. The history of the case was the interesting feature. When taking iodide, nodules ranging from walnut to orange in size were of frequent occurrence. The lesions developed suddenly and disappeared within a day or two. Nodules never developed excepting under the influence of iodide. The patient had been under observation for some time at Dr. Fordyce's clinic and the history was reliable.

DR. FORDYCE said that several years ago, in a report on drug eruptions read before the American Dermatological Association, he had reported several cases of iodide eruptions, and among them he described the deep nodular form similar to the one presented. The case which he reported then, as well as the one shown, presented evidence of infection of the spinal cord. The lowered resistance brought about by this condition might be invoked as a contributing factor in the etiology.

PAPULO-NECROTIC TUBERCULIDE. Presented by DR. WISE.

The patient, David L., aged 22, was born in Southern Russia. He came from the Beth Israel Clinic. The family history was negative. He had had measles and scarlet fever during infancy, but no illness since childhood. The eruption consisted of a multitude of lesions distributed over the hands, forearms, feet and lower legs, also on the elbows and knees. On the backs of the forearms and hands there were a number of pin-head to split-pea sized papules, with necrotic centres, showing all the various stages of evolution. Interspersed among these were numbers of small depressed scars, the remains of previous lesions. The striking feature of the case was that in the palms of the hands there were numbers of depressed scars, especially numerous near the wrists. Similar lesions on the feet were distributed chiefly along the inner borders. The trunk and limbs were free of disease. Physical examination, made by Dr. Kent, was negative.

DISCUSSION.

DR. WENDE expressed much interest in the case, and said in regard to the palmar lesions that they were unique, in so far as his experience went.

DR. WHITEHOUSE said that the lesions on the hands and fingers were characteristic, and it was probably a case of tuberculide.

DR. SIERWELL said that he could not make a diagnosis, but that he would have thought it a case of syphilis.

LICHEN PLANUS, ACUTE. Presented by DR. DADE.

The patient was a young man, and the case was presented only on account of the great extent of the lesions over the entire body, sides of the mouth and

the tongue, and palms and soles—the only classic exception being the glans penis. The condition had existed for two months, following a nervous crisis.

DISCUSSION.

DR. WHITEHOUSE said that the keratosis in the case was unusual for lichen planus, but the other lesions in the palms were very characteristic of lichen planus of the palms.

DR. WENDE reported a case of lichen planus under his care. The patient was a woman, forty years of age, nursing a child ten months old, who also showed typical lesions of the disease. The mother's skin eruption corresponded to the typical lesions of lichen planus—small, irregularly shaped papules; some were flat, some were umbilicated, others presented a beaded appearance, all definitely representing the disease.

DR. FORDYCE said that the case Dr. Wendé had described was very unusual. He himself had never seen two cases in one family.

DR. WENDE replied that it was not unheard of, as a number of instances were on record.

DR. FORDYCE, replying to a query about the use of autogenous serum, said that he had not used it in lichen planus but that he had used it in psoriasis and in dermatitis herpetiformis that had existed for years and had caused a great deal of suffering. The patient had developed bullous, vesicular and urticarial lesions. She went abroad last summer and had a very severe outbreak in Dublin. She had lesions in the mouth and her gums were affected. She was given four intravenous injections of her own serum. After the first two doses, she grew worse and the lesions were intensified, and she insisted on stopping the treatment, but she was persuaded to continue it, and after three more doses she cleared up and had more relief than since the beginning of her trouble. The condition had resisted all the other methods that had been employed. She received 30 cc. of serum at intervals of five days.

DR. DADÉ said that he presented the case as a remarkable one on account of the extent of the lesions. He had seen lichen planus of the palms before,—one case where it was confined entirely to the palms and the glans penis. In the present instance, the glans penis was the one classic spot not affected, the exception which would otherwise make the case unique.

FOR DIAGNOSIS (ONYCHIA). Presented by DR. MACKEE for DR. FORDYCE.

The patient was a man of 18 from Dr. Wise's service at the Vanderbilt Clinic. The affection began on the thumb nail of the left hand about one year ago. Later all the nails of the hands and feet became involved. The disease began at the lateral margin of the nail which became thickened and opaque. The affection then slowly involved the entire nail which became scaly, brittle and ridged. Scrapings were obtained but spores were not found. There were no lesions on any other part of the body.

DISCUSSION.

DR. WHITEHOUSE thought that the semi-lunar white degeneration of the nails, beginning on the sides, suggested psoriasis. He had often seen it in psoriasis, and when present he was always suspicious of that disease.

DR. WINFIELD was inclined to agree with Dr. Whitehouse, and recalled a case which presented the same lesions of the nails for two or three years and then developed typical psoriatic patches in different parts of the body.

DR. WENDE suggested that the unusual nail condition might be due to syphilis. He had seen cases of syphilis wherein the same appearance and changes in the nails occurred. While the case did not correspond to the usual appearance of

syphilitic onychia, nevertheless, it might be due to some nutritional change influencing the nerve supply.

DR. JOHNSTON thought that other nutritional changes than those of syphilis might produce the same nail changes. He was not in favor of the diagnosis of psoriasis, for in the few cases he had seen when diagnosis could be made without skin lesions, the scales were heaped up at the borders and so lifted the nail as to make it bi-concave and shovel-shaped, which was the typical psoriatic nail. There were no changes in this case approximating such a condition. It seemed possible that the man might be suffering from a slight hypothyroidism. The thumbnail, particularly, suggested that.

DR. HOWARD FOX said that he would make a diagnosis of atrophy of the nail and let it go at that. They were thinner, and the base was not affected. As there was no keratosis beneath the free border of the nail, he would not think of psoriasis. Syphilis or hypothyroidism might have been the cause of the atrophy.

DR. FORDYCE asked if any one present had ever seen a case of tinea versicolor of the nails. He had seen one such case. The patient had evidently infected his nails by scratching his body. It looked very much like a ringworm of the nails. The matrix was not affected. He had seen psoriasis of the nails where the patient had psoriasis of the scalp, and the nails became infected from scratching the scalp. He mentioned these instances simply as a clinical observation.

CICATRICAL ALOPECIA. Presented by DR. KINGSBURY.

The condition had existed during fourteen years, beginning on the back of the scalp and extending to the top. The patient stated that she had never had any sores on her scalp.

DISCUSSION.

DR. JACKSON agreed with the diagnosis. The case was not one of folliculitis decalvans but of cicatrising alopecia. He preferred to call it by Crocker's name, alopecia cicatrisata, rather than the French name, pseudo-pelade.

DR. JACKSON presented the multiple needle apparatus of Kromayer, for the destruction of superfluous hair. It consisted of six needles attached to delicate wires which passed up through a small tube into which the end of the wire of the battery was inserted. It was designed to insert all the needles into different hairs and then turn on the current, thus destroying them all at the same time.

DR. G. H. FOX said that he was one of the first to use electrolysis for the removal of superfluous hair and had had considerable experience in regard to the multiple needle. It appeared very well in theory, but it would not work in practice. If one was going to remove hair from the lip or chin, he must devote all his attention to one hair at a time. He did not believe that this multiple arrangement had any value whatever.

DR. WINFIELD said that he had once conceived the idea of trying to remove half a dozen hairs at a time, but that he found difficulty in keeping a number of needles in at one time. The angles of the hairs were different and some of the needles would go in the follicles and others somewhere else, so he gave it up.

DR. JACKSON said that he had not tried it, but had simply imported it to see what it looked like.

DR. HOWARD FOX presented a photograph that had been sent to him from Jerusalem. It was a case of "Oriental Sore," occurring in an adult man who at the end of a two months' visit to Jericho had begun to suffer from "boils." According to the history that was given, "there were fifty-five lesions in all, ten of which were large. Some were ulcerated and others were covered with thick crusts. He was treated with injections of neosalvarsan. After three injections, all of the lesions disappeared except two large ones on the face. These dried up, became swollen, and stopped ulcerating, but up to eight days after the last in-

jection had not quite healed." In the photograph presented, there were about ten crusted lesions on the face.

DR. DADE told of an interesting case of a woman who had been brought to him with a very marked generalized syphilide covering her from head to foot. For the past two years she had suffered from ulcer of the stomach, the last hæmorrhage being so severe that she was transfused from her brother. Six weeks later she broke out with this eruption. He denied everything, but gave a 4+ Wassermann. The possibility of her having gotten the eruption elsewhere was ruled out, as she had been so ill for the past two years, and for other reasons there seemed no possibility of having gotten it in any other way. There were naturally no enlarged glands anywhere. She had gained fifteen pounds since the transfusion of blood, and the eruption disappeared in two weeks, after salvarsan. Dr. Dade said he had only mentioned this case to show the danger of transfusion from the infected source. There was no doubt but that this was the way she acquired the syphilis.

DR. FORDYCE said that Dr. Dade's report was a very interesting one, as very little was known regarding such cases of infection. A year ago, an orderly in the City Hospital, while taking blood from a patient in the florid stage of syphilis, punctured his hand with the needle and had no initial lesion, but later developed a few secondary papules. Every other mode of infection was ruled out. It would seem, therefore, that in these cases the spirochætæ entered the blood stream directly, without producing an initial lesion.

DR. WENDE reported a case of extensive papillomatous or vegetating syphiloderm in a woman of about forty years of age, the mother of eight healthy children. She stated that in April, 1913, a "sore" appeared upon her arm which gradually increased in size; six weeks later, another spot was noticed on her forehead, and before December 1st, or about eight months later, when she came under observation, there were about fifty lesions on different parts of her body; the one on her arm covered the entire cutaneous surface, and the diameter of the limb was increased to more than five times its natural size.

In the speaker's experience the character of the eruption was unique, on account of the extensive papillomatous growth. The only lesion it resembled was a condylomatous one, and it carried with it the same offensive odor. A diagnosis of syphilis was made, in spite of the unusual type of lesion, that also somewhat resembled the appearance of mycosis fungoides. The Wassermann reaction was strongly positive. *Spirochætæ pallidæ* were found in abundance in all of the cutaneous lesions examined, and were obtained from the blood. When she first came under observation, her general health was good and her appetite was enormous. She received nine intravenous salvarsan treatments, in increasing doses; the last one represented one gramme. An interesting fact in connection with the case was that apparently a fresh outbreak of the lesions followed the administration of the treatment. At the time of her death there were about two thousand lesions present, many of which had become gangrænous and were sloughing. In addition to receiving salvarsan, she received mercury (both by injection and inunction) and iodide of potash, without any beneficial results.

DR. FORDYCE asked about the age of the infection.

DR. WENDE replied that no definite history was obtained. There was no evidence of syphilis in her "man." The family of ten or eleven lived in very close quarters (two rooms) and no other member of the family contracted the disease. The infection seemed to be comparatively recent.

The speaker said that while he might be mistaken, yet having repeated the injection so often he was satisfied that there had always been a fresh outbreak of the lesions after giving the salvarsan.

DR. FORDYCE said that it was evidently a different type of syphilis from the ordinary one.

DR. HOWARD FOX reported upon an extraordinary case he had recently seen at the Willard Parker Hospital. The patient, an aged man, had been admitted to the Reception Hospital as a case of measles and a possible scarlatina. When seen, about ten days after admission, there were four distinct types of generalized eruptions, all traces of measles having disappeared. He presented a typical circinate type of desquamation of scarlet fever, and, in addition, generalized eruptions of macules, papules and flaccid bullæ. All of these lesions eventually cleared up, complete recovery taking place. There were no symptoms of syphilis, and the Wassermann test was negative. The diagnosis of erythema multiforme following scarlet fever was made.

CASE FOR DIAGNOSIS (RINGWORM). Presented by DR. WINFIELD.

The patient, a Syrian peddler, came to the Kings County Hospital two months ago with a scaly eruption on her face, neck, chest and arms. The scales were silvery and shining, and there was intense itching. It was thought at first that it was due to some fungus or was perhaps of the ringworm type. It was examined microscopically for fungus and cultures were made, but nothing was found. The Wassermann and von Pirquet tests were both negative.

LYMPHANGIOMA. Presented by DR. DADE.

Dr. Dade said that he presented the case merely as a curiosity. The patient was a young man, 22 years old. When two years of age he had had an operation for the removal of a large tumor in the right axilla, and the lesions in and about the right axilla followed the operation and had persisted since, and were probably due to lymphatic blocking. The eruption consisted of a group of translucent, thick-walled vesicles ranging in size from a pinhead to a lentil.

NEURODERMATITIS (PRURITIC, PAPULAR ERUPTION OF AXILLÆ AND PUBIC REGION). Presented by DR. TRIMBLE.

The patient was a young woman, born in this country of Austrian parents. She presented under both arms, and slightly on the genitalia, myriads of small pale papules, some of which had a small central depression. The itching was at times severe, but not constant. It was the same type of case as those shown by Drs. Fox and Fordyce some years ago.

DISCUSSION.

DR. MACKEE said that the case recalled those reported by Fox and Fordyce. He agreed with the diagnosis of Brocq's neurodermatitis.

NEVUS UNICUS LATERIS. Presented by DR. JACKSON.

The patient was a girl fifteen years of age. The chief interest in the case was its history of having begun when she was three years old and having progressively increased in size. It was located on the left side of the head, a short distance behind the ear. While most of it was under the hair, it extended down below the line of the hair. It was triangular in shape, its base pointing forward and its apex backward and downward. It was of brown color, of rugose surface, one edge being slightly papillomatous. At its anterior edge there were a few warty lesions. Some itching was complained of. The patient was presented through the courtesy of Dr. Helen Baldwin.

DISCUSSION.

DR. TRIMBLE told of a case of linear nævus which he had under observation. The lesion was on the side of the neck, six inches long and half an inch

wide. He treated it with carbon dioxide snow and apparently produced a beautiful result, but six months later the lesion returned and was just as bad as before.

MYCOSIS FUNGOIDES. Presented by Dr. TRIMBLE.

The patient presented extensive red, scaly, infiltrated areas of premycosis. He was 62 years of age, and the condition had existed for 37 years. Along with the skin condition, the legs were greatly swollen. The urine analysis showed a mild trace of albumin and a few casts. Both the skin lesion and the œdema showed marked improvement under sodium arsenite injections.

Dr. TRIMBLE said that his case was presented mainly on account of the good result following the arsenic injections. He recalled that Dr. Kingsbury had previously shown a woman with mycosis fungoides in the intermediate stage, showing nodules, the lesions of which had completely disappeared with four doses of neosalvarsan. His own case had had only four injections of sodium arsenite.

ACNE VARIOLIFORMIS. Presented by Dr. MacKEE for Dr. FORDYCE.

The patient, J. B., 50 years of age, born in Austria, a detective, was from Dr. Wise's service at the Vanderbilt Clinic.

The eruption began on the scalp four months ago, gradually spreading to the forehead and nose. The lesions began as hard, split-pea-sized nodules under the skin. These soon became papular, ulcerated, formed a crust and then healed, leaving a depressed scar.

When presented to the Society there were numerous lesions in various stages of development scattered over the scalp, nose and forehead. There were, also, many small, depressed scars, the remains of former lesions.

MULTIPLE BENIGN CYSTIC EPITHELIOMA OR ADENOMA SEBACEUM? Presented by Dr. WISE.

The patient, a man of 26, was from the Beth Israel Hospital. The lesions developed 3 years ago, according to the patient's statement. He admitted that one lesion on the eyelid had existed as long as he could remember. The eruption consisted of semi-translucent papules, ranging in size from a pinhead to a lentil. They were located on both cheeks, near the nose, with a few on the lower eyelids. There was no telangiectasia.*

LUPUS VULGARIS. Presented by Dr. MacKEE for Dr. FORDYCE.

The patient, a boy of 10, was from Dr. Wise's service at the Vanderbilt Clinic. He was presented to the Society by Dr. Jackson about 3 years ago. At that time the disease occupied the centre of the chest and right shoulder. Since then the lad had been subjected to divers treatments, including X-ray, surgical ablation, CO₂, etc. When presented by Dr. MacKee there was a solid patch of white scar tissue occupying the entire chest. Its lower border extended across the body at the ensiform cartilage. The lateral margins were represented by the anterior axillary lines. The upper margin was represented by the neck and shoulders. On the right side the scar extended over the shoulder and occupied the right supra- and infra-scapular regions. Scattered throughout this large scar were numerous lupus nodules and dime-sized areas of ulceration. At vari-

* Histological investigation, made in the DERMATOLOGICAL LABORATORY, revealed a typical adenoma sebaceum.

ous places in the margin of the scar there were palm-sized patches of coalesced nodules.

There was a palm-sized patch of the disease on the left knee. The boy was in good general health but was mentally defective. The Wassermann reaction was negative; the von Pirquet reaction was positive. The tissue under the microscope showed typical lupus vulgaris. The family history was said to be negative. The patient was being treated by injections of tuberculin bacillus emulsion.

KELOID TREATED WITH THE X-RAY. Presented by DR. MACKEE.

The patient, a man of 35, was from Dr. Wise's service at the Vanderbilt Clinic. The X-ray had been applied by Dr. Remer. There had been a keloid occupying the entire dorsal surface of the left hand. It was elevated 1 inch, was bluish-red in color, was unusually hard and had a very irregular margin. It resulted from a burn from an electric arc. Six massive-dose X-ray treatments were administered at intervals of about 6 weeks. When presented to the Society the tumor had entirely disappeared, leaving a flat, white, soft scar. There were a few telangiectasies. A photograph was also presented to show the condition before treatment was instituted.

HYDROA VACCINIFORME. Presented by DR. MACKEE for DR. FORDYCE.

The patient, a boy of 11, was from Dr. McMurtry's service at the Vanderbilt Clinic. The disease had been present for several years. The lad was comparatively free of the eruption in the winter, but there was a severe exacerbation every spring. When presented to the Society there were many hæmorrhagic vesicles on the forehead, cheeks, chin, ears and backs of the hands. There were, also, many crusts and a few pustules. Numerous scars could be seen on the parts enumerated.

RODENT ULCER HEALED BY THE X-RAYS. Presented by DR. MACKEE.

The patient, a woman of 40, had had a silver-dollar sized basal-celled epithelioma on the left side of the forehead. The lesion was adherent to the underlying tissues. One massive dose of the X-ray, consisting of H8, B9-10, had been applied. This resulted in an erythema, but the condition was not benefited. Two months later, H16, B9-10, filtered through 3 millimetres of aluminium, was then given. This treatment was followed by a mild second-degree radiodermatitis and, later, by complete healing and disappearance of the epithelioma, with the exception of a split-pea-sized nodule in the centre of the scar. This nodule remained quiescent for 6 months and was then excised. Under the microscope there was a mass of columnar epithelial cells walled in by dense connective tissue. The treatment had been applied two years previously and there had been no recurrence.

SCARRING FROM MORPHINE INJECTIONS. Presented by DR. MACKEE for DR. FORDYCE.

The patient, a man of 55, was from Dr. Wise's service at the Vanderbilt Clinic. There was a definite history of syphilis with involvement of the nervous system. The arms, legs, buttocks, lateral aspects of the back, abdomen and chest were covered with scars resulting from morphine injections. Many of the scars were slightly hypertrophic and white, but most of them were depressed and presented a bluish color, which recalled the case of blue atrophy of the skin resulting from cocaine injections reported by Gottheil.

MYCOSIS FUNGOIDES. Presented by Dr. MacKEE for Dr. Fordyce.

The patient was a woman of 60. The eruption began 2 years ago. When presented to the Society there were numerous palm-sized, slightly infiltrated, dull-red, slightly scaly plaques, scattered over the body. Itching was a marked symptom. The general health was not affected. The glandular system was not involved.

PSORIASIS RESEMBLING DERMATITIS EXFOLIATIVA. Presented by Dr. MacKEE for Dr. Fordyce.

The patient, a man of 40, was from Dr. Wise's service at the Vanderbilt Clinic. He had suffered from inveterate psoriasis for many years. Recently, individual patches of the disease had coalesced so that when presented to the Society he was literally covered with the eruption. Very little healthy skin could be seen. There was a great deal of exfoliation and infiltration. There were a few isolated patches of typical psoriasis about the ankles, on the scalp and on the neck.

SARCOMA (?) DEVELOPING IN A SCAR. Presented by Dr. MacKEE for Dr. Fordyce.

The patient was a man of 38, who was under the observation of Dr. McMurtry at the Vanderbilt Clinic. Seven years ago there had been an operation for tuberculosis (?) of the tibia. When presented to the Society there was a depressed scar 6 inches long over the upper part of the anterior surface of the tibia. Near the lower extremity of this scar there was a walnut-sized, firm, reddish-brown nodule, which was first noticed about 2 weeks previously. The lesion was developing rapidly. There were no subjective symptoms.*

CASE FOR DIAGNOSIS. Presented by Dr. Howard Fox.

The patient, Ella R., was 23 years of age, born in the United States. The family and previous histories were unimportant. The menses were established at sixteen. She stated that about ten years previously an eruption had appeared upon the face and had gradually extended to the arms and neck. She had been seen by Dr. Fox four years before, at which time she presented a persistent, diffuse erythema of the face, neck and chest. This had gradually improved until within the past year or two, since which time the process had remained stationary. Examination of the patient showed her to be an anæmic, slim, delicate-appearing girl. An eruption that varied according to the situation was present upon the face, neck, chest, arms, forearms and backs of the hands. The appearance of the face was that of a seborrhœa. At the nape of the neck there was a patch consisting of small, pinhead, flattened papules, apparently a lichenification. On the chest was a somewhat reticulated area of closely crowded telangiectases. On the arms were streaky patches, looking like a diffuse atrophy. The skin over the elbows was red, smooth and infiltrated, and on the backs of the hands were light-reddish, smooth, thickened areas, somewhat suggestive of lupus erythematosus. The scalp appeared to be normal.

CHRONIC RADIODERMATITIS. Presented by Dr. Wise.

The patient, a man of 40, was from the Beth Israel Hospital. About a year ago he had had a fluoroscopic examination for gallstones. This was followed by a third-degree radiodermatitis. When presented to the Society there was a palm-sized, indolent ulcer in the lumbar region, which extended into the mus-

* The entire nodule was excised at a later period and found to be sarcoma.

cular tissue. Surrounding the ulcer there was a wide area of scar tissue and telangiectasia. The patient suffered considerable pain.

DISCUSSION.

DR. HOWARD FOX thought it would be a good plan to try the treatment with autoserum in this case, in view of the excellent result obtained by Dr. Gottheil in an extensive X-ray burn of the abdomen. In this case, the patient had received five injections of the autoserum, improvement in the severe pain beginning after the first injection. When recently seen by Dr. Fox, the patient showed a remarkable improvement, the lesion looking as if it had been recently skin grafted.

REVIEW
OF
DERMATOLOGY AND SYPHILIS.

Under the direction of

FRED WISE, M.D., New York.

Assisted by

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CLINICA DERMOSIFILOPATICA DELLA R. UNIVERSITA
DI ROMA.

(May, 1914, xxxii, No. 2.)

Abstracted by G. A. CARLUCCI, M.D.

FURTHER REPORTS REGARDING THE SPOROZOÖN OF MOLLUSCUM
CONTAGIOSUM. CAMPANA.

Remarks made at the Dermatological Society meeting, Dec. 19, 1914.

CERTAIN PECULIARITIES IN THE MODUS OPERANDI OF SALVAR-
SAN ON SYPHILITICS AND ON TISSUES OF ANIMALS. ALESSI.

A report of a series of cases treated with salvarsan, and some experiments on animal tissue, and on animals.

814 REVIEW OF DERMATOLOGY AND SYPHILIS

The author concludes that salvarsan was of great value in all cases except ones with some disorder of the nervous system.

He is of the opinion that dioxidiamido-arsenobenzol is less stable than the arsenate of soda, as brought out by the fact that in the experiments with starch, the first mentioned turns the starch dark while the second does not. And this, he thinks, is the cause of the inactivity of salvarsan when administered by the mouth as, coming in contact with starches in the stomach, it decomposes probably into an inactive product.

A STUDY AND DESCRIPTION OF SOME CHANGES OF THE SKIN AND OTHER ORGANS, PECULIAR IN THEIR MORPHOLOGY AND COURSE. COSTA.

A description of a series of cases, mostly obscure syphilitic conditions.

LO SPERIMENTALE.

(May 28, 1914, lxviii, No. 2.)

Abstracted by G. A. CARLUCCI, M.D.

REGARDING A NEW DISEASE OF MAN, "MONOSPOROSIS," DESCRIBED IN A TREATISE OF PARASITOLOGY. GIULIO TAROZZI.

A criticism of a chapter by Prof. Radaeli on "Monosporosis" in a treatise of parasitology, "Infectious Diseases of Man and Animals," edited by Prof. A. Lustig, Milan, published by F. Vallardi, 1913.

ON THE SUBJECT OF "MONOSPOROSIS." FRANCESCO RADAELI.

The author discusses and refutes the previous articles, giving his reasons for describing, in his opinion, a new form of fungus, somewhat analogous to that of actinomycosis.

BRITISH JOURNAL OF DERMATOLOGY.

(May, 1914, xxvi, No. 5.)

Abstracted by CHARLES T. SHARPE, M.D.

A NOTE ON TWO CASES OF EPITHELIOMA ADENOIDES CYSTICUM (BROOKE). TRICHO-EPITHELIOMA PAPULOSUM RODENS (JARISCH). E. G. GRAHAM LITTLE, p. 173.

Little reports a case of multiple benign cystic epithelioma occurring in a laborer, aged 68, and a case of tricho-epithelioma in a carpenter aged 58. He gives the clinical reports and the histological findings in both. He doubts whether the diagnosis will be accepted because of the proposals of Adamson as to the differentiation of these tumors from multiple rodent ulcer. However, there is an established precedence for the occurrence of these lesions in males and after adult life and he concludes that "None of the clinical differentiations offered can be therefore strictly maintained, and it seems equally difficult to establish a histological criterion. The two cases together accentuate the extraordinary

difficulty of deciding the diagnosis between Brooke's disease and rodent ulcer, and lend much color to Adamson's latest view that they are, in fact, essentially the same pathological process—a view which is supported by the reflection that all criteria hitherto advanced for differentiating the two conditions have broken down in practice."

Little found carbon dioxide freezing beneficial in treatment.

ON THE BIOLOGICAL POSITION OF THE SPIROCHÆTA AND ITS DEVELOPMENT. MEIROWSKY. (Abstracted by Dr. H. C. SEMON, p. 185.)

The original article appeared in the *Derm. Wehsh.*, lviii, 1914.

CONCERNING PROTEIN METABOLISM IN DISEASES OF THE SKIN. AN ANSWER TO DR. H. LETHEBY TIDY'S CRITICAL REVIEW. JAY F. SCHAMBERG, A. I. RINGER, G. W. RAIZISS AND J. A. KOLMER, p. 192.

The authors discuss the criticism of their original article by Dr. Tidy and state, "We therefore feel justified in concluding that the suggestion of possible loss through the skin which escaped our attention, with the exception of very small quantities, is both unjustified, and is based on no experimental evidence."

EDINBURGH MEDICAL JOURNAL.

(May, 1914, xii, No. 5.)

Abstracted by CHARLES T. SHARPE, M.D.

DIFFUSE SCLERODERMIA: ITS FREQUENCY; ITS OCCURRENCE IN STONE-MASONS; ITS TREATMENT BY FIBROLYSIN; ELEVATIONS OF TEMPERATURE DUE TO FIBROLYSIN INJECTIONS. BYRON BRAMWELL, p. 387.

Of the 9 cases reported, 5 occurred in stone-masons; 1 in a coal-miner; 1 in a coppersmith; 1 in a merchant; and in 1 case there was no occupation. In the artisans there seemed to be a relationship between the use of tools and the original site of the disease.

Three cases treated by warmth; fibrolysin; with massage and passive movements, showed marked improvement. The fibrolysin injections were followed by elevation of temperature. The 9 cases were found among 27,000 patients.

MEDICAL RECORD.

(May 30, 1904, 85, No. 22.)

Abstracted by CHARLES T. SHARPE, M.D.

THE PROVOCATIVE WASSERMANN REACTION. MARSHALL CARLTON PEASE, JR., p. 982.

Pease tabulates 8 cases, all of which showed positive provocative Wassermann, while 4 of these showed negative Wassermann and 4 weakly positive. In

these cases the initial lesion appeared from 3 to 16 weeks previously. In 21 other cases of tertiary or hereditary type, 11 negatives gave a positive Wassermann after a provocative dose of salvarsan or neosalvarsan. The luetin test showed to considerable advantage in the same series.

He concludes: It has seemed worth while to bring these particular cases together as proof that the test has a real place in the diagnosis of certain obscure cases of syphilis and as emphasizing the now accepted fact that treatment may change a negative Wassermann into a positive one. The indications for a provocative Wassermann test are (1) a doubtful positive reaction and (2) a negative test in the presence of a history or symptoms which point to a syphilitic infection. A negative provocative Wassermann is the best evidence available at the present time of the actual cure of syphilis.

JAPANISCHE ZEITSCHRIFT FÜR DERMATOLOGIE UND UROLOGIE.

(April, 1914, xiv, No. 4.)

Abstracted by FRED WISE, M.D.

MILIUM WITH GIANT CELL TISSUE. S. HANAWA, p. 279.

On the scrotum of a man of 21, there were numerous pin-head sized, yellowish-white, superficial nodules, which were easily removable on incision. The duration was one and a half years. They were diagnosed as milium. Histologically, they were cysts of the sebaceous glands, surrounded by giant cell tissue. The author found the following points of interest in the sections:

1. Kaposi's opinion, that the milium cysts originated from acini of sebaceous glands, was corroborated.

2. As to the cause of the retention, no exact reason was ascertained. Probably the cause did not lie in mechanical closure of gland ducts, as in atheroma, but was due to disturbances in the excretion of the sebaceous secretions, from a chemical factor, resulting in cyst formation.

3. As to the substance of the giant cells, it is comprised of the endothelial cells of lymph spaces, for beside and between these giant cell masses, can be seen lymph vessels whose endothelial cells are swollen, and forming transitional types of giant cells. The presence of a foreign body within the cyst has caused a transformation of endothelial cells into giant cells, by reason of irritative action.

4. The epithelium lining the cyst wall was destroyed, and the contents of the cyst acted as a foreign body on the connective tissue, causing the formation of giant cells in large numbers.

ROENTGEN THERAPY IN SYRINGOMA. S. HANAWA, p. 288.

In a case of syringoma of the chest, abdomen and shoulders, with a multitude of lesions, the author employed a $\frac{1}{3}$ erythema dose, 5 Wehnelt X-radiation.

After four successive treatments, all signs of the disease disappeared, even on microscopic examination.

THE USE OF STALE DISTILLED WATER IN INTRAVENOUS NEOSALVARSAN INJECTIONS. G. MITSUO, p. 293.

The author, after much investigation, considers the use of stale distilled water permissible, provided freshly distilled water cannot be obtained.

STATISTICAL STUDIES OF SKIN TUMORS IN OUR CLINIC, DURING THE LAST SEVEN YEARS. K. ASAH! AND K. MURASAWA, p. 304.

Of 22,000 patients visiting the skin clinic at Fukuoka, 552 were afflicted with tumors of the skin; the authors give a tabulated account.

INVESTIGATION CONCERNING TREATMENT WITH ANTILEPROL. T. KIMOSUITA, p. 312.

Good results were obtained from the intramuscular injections of antileprol (derived from *ol. chaubmoogra*), especially in cases of *lepra tuberosa*.

CONCERNING SO-CALLED ELEPHANTIASIS NOSTRAS. N. NAKATO, S. OMORI, T. MURATA, T. KAWAGUCHI, p. 318.

The types of cases described in Europe occur also in Japan. They are of chronic inflammatory nature and differ from the European types in negative findings as to filaria.

Three cases of elephantiasis vulvæ and two of elephantiasis thickening of the leg are reported. Their ætiology was in relation to extirpation of buboes, chronic eczema and erysipelas.

VIRGINIA MEDICAL SEMI-MONTHLY.

(May 22, 1914, xix, No. 4.)

Abstracted by CHARLES T. SHARPE, M.D.

AN ATYPICAL CASE OF SPINAL SYPHILIS. MEADE C. EDMUNDS, p. 93.

This is a report of paraplegia occurring in a negress, aged 26. Lumbar puncture showed the cerebro-spinal fluid to be cloudy, under increased pressure, and showing, on analysis, positive Wassermann, heavy excess of globulin, pleocytosis of 930 lymphocytes and polymorphonuclear leucocytes per cmm. and a negative Fehling reduction. The blood Wassermann was also strongly positive.

BOOK REVIEWS.

LEHRBUCH DER HAUT- UND GESCHLECHTSKRANKHEITEN, von Dr. EDMUND LESSER. Geh. Medizinalrat, O. Professor an der Universität und Direktor der Universitätsklinik und Poliklinik für Haut- und Geschlechtskrankheiten in Berlin. Dreizehnte erweiterte Auflage. Mit 163 Textfiguren und 31 Tafeln. Verlag von *Julius Springer*, Berlin, 1914.

This work, written by one of the greatest contemporary dermatologists, must be looked upon as a model text-book on diseases of the skin and syphilis. It is a stout and rather heavy volume of 650 pages, with closely printed leaves, and contains a vast amount of information between its covers. Even from a superficial perusal, one gains the impression that the subject-matter therein contained is a

faithful reflection of the author's many years' experience in the field of dermatology, the venereal diseases, and syphilis.

The volume is divided into two parts: 1. Skin Diseases. 2. Sexual Diseases. Under the latter, the author includes gonorrhœa and its complications, soft chancre, and syphilis. The inclusion of syphilis under the caption of sexual diseases is, of course, archaic and unfortunate. To the student (not to mention the advanced dermatologist), the presentation of a moulage representing a chancre of the index finger in a midwife, for example, must seem incongruous and out of place in the pages devoted to the so-called "sexual" diseases. In a modern text-book of this type, it would seem preferable to divorce the subject of syphilis, once for all, from such captions as "venereal" and "sexual." The same may be said to apply to soft chancre.

About one-half of the book is devoted to diseases of the skin; the other half deals mainly with syphilis. The subjects of gonorrhœa and chancroid occupy about 70 pages of the text.

In reading over Lesser's presentation of the diseases of the skin, we are at once struck by the author's original and unprejudiced descriptions. He renders remarkably clear and comprehensive pictures of the various cutaneous diseases, describing them as they appear to his mind's eye, dilating and particularizing on important points, and dismissing the less practical phases of the subject in a few words. The two most important aspects of each disease, namely, the symptomatology and the therapy, are dealt with in a comprehensive and highly interesting manner. On account of his desire to make this a "practical" text-book, but little space is given to aetiology and pathology—a circumstance to which the author calls attention in his preface. Lesser's grouping of the diseases does not conform to that of other authors, but his arrangement is intended to represent chiefly a "practical" association of various diseases to each other. Some of the following observations, which can hardly be regarded in the light of criticisms, disconnected though they are, may be of interest to the readers of this review.

Pityriasis rubra (Hebra), *lichen ruber acuminatus*, *pityriasis rubra pilaris* and *dermatitis exfoliativa* are clearly and convincingly described as four separate and distinct diseases.

There is a beautiful full-page lithograph, representing a moulage from a case of *érythrodermie pityriasique en plaques disséminées*, but the entire subject of the parapsoriasis group of diseases, with its many ramifications, unfortunately occupies only a third of a page of text.

Ten pages are devoted to lepra; only a half-page to pellagra. A very short and incomplete description of Kaposi's idiopathic hæmorrhagic sarcoma follows a detailed and complete chapter on *mycosis fungoides*.

Acne varioliformis immediately follows *acne vulgaris*. Lesser states that no aetiological factor has been discovered, bearing on the former condition. Darier's disease and *acne vulgaris* are presented in the same chapter, in intimate proximity.

Pityriasis rosea is included under the caption of *tinea tonsurans*, although the author calls attention to the negative findings in the former dermatosis.

A full page is given to the bizarre but unimportant "creeping eruption"; while the subject of multiple benign cystic epithelioma, *trichoepithelioma* and allied conditions receives only eight lines.

Sarcoid of Boeck is coupled with *erythema induratum*, but the large and intricate subject of the sarcoids in general is dismissed in a scant seven lines, which is rather disappointing to any one depending upon text-books for his source of information.

Many of the rarer dermatoses are not mentioned in the work. Taken at random, the reviewer recalls *granuloma annulare*, *erythema elevatum et diutinum*, *angiona serpiginosum*, *purpura annularis telangiectodes*, *erythromelalgia*, etc., etc.

The important diseases, of which *lupus vulgaris* is a type, are described very

fully and are illustrated with beautiful reproductions of moulages and half-tones. The newer dermatoses, sporotrichosis, for example, are dealt with quite comprehensively.

The subject of syphilis is dealt with in masterly fashion and is considered from every conceivable angle. Practically all that is known at the present day with regard to the disease may be found in the second half of this work, rendered in a clear and interesting style. The subjects of ætiology, serology and therapy are considered in full. The Wassermann reaction is described in detail.

Nearly all of the illustrations, colored and half-tone, are excellent. The index is unusually complete, requiring nearly 80 pages. At the end of the book is appended a list of 86 prescriptions for external and internal use, many of which are well worth bearing in mind.

F. W.

HOW TO DIAGNOSE SMALLPOX. A GUIDE FOR GENERAL PRACTITIONERS, POST-GRADUATE STUDENTS AND OTHERS. By W. McC. Wauklyn, B.A. Cantab. M.R.C.S., L.R.C.P., D.P.H. Assistant Medical Officer of the London County Council, and Formerly Medical Superintendent of the River Ambulance Service (Small Pox) of the Metropolitan Asylums Board. With Illustrations. *Paul B. Hoeber*, New York, 1914.

This is a small volume of 104 pages, written in a somewhat conversational manner, that reads easily and should serve admirably to impress upon the general practitioner the salient points in the diagnosis of smallpox.

The first two chapters deal with the epidemiology of the disease, the third, and a very important one, with practical points in the method of examination, and the remainder with diagnosis and differential diagnosis.

The author acknowledges his indebtedness to his former teacher and colleague, Dr. T. F. Ricketts. Would that more, who are engaged in public health work, were familiar with his teachings! Then the day would have passed for basing a diagnosis of smallpox on the umbilicated vesicle. Let me quote this much: "In some cases, and those among the most severe and infectious, umbilication may never be present from beginning to end. On the other hand, a chicken-pox rash is not infrequently marked by umbilication."

It should also be remembered that "shottiness" may or may not be present, and that "it is precisely the worst class of smallpox, of the most infectious type, that is apt to have a soft, almost velvety papular rash." This is noticeable "in cases in which the potency of the poison appears completely to overpower the healthy working of the tissues, and but a feeble reaction takes place."

The importance of this work to the dermatologist should be emphasized.

C. T. S.

CHRONIC ULCERS OF THE LEG. A Practical Guide to its Symptomatology, Diagnosis and Treatment. By EDWARD ADAMS, M.D., Instructor of Surgery, New York Post-Graduate Medical School and Hospital; Attending Surgeon to the German Hospital, O.P.D.; Fellow of New York Academy of Medicine; Fellow of American Medical Association, etc. *International Journal of Surgery Co.*, 1914.

This is a small volume of 127 pages devoted to the study of leg ulcers. The author deals with the causes and treatment of leg ulcers and describes in detail the technique of the application of special dressings, as, for example, Unna's paste. Reference is also made to bullous lesions, epitheliomatous ulcers, syph-

ilitic ulcers, tuberculous ulcers, Bazin's disease, and other special types. The subject of phlebitis is dealt with in an interesting manner and the various treatments discussed, special attention being given to the several surgical methods of curing this condition.

The book is readable and instructive and should be found very useful.

C. T. S.

STUDIES CONCERNING THE CULTIVATION OF BACTERIA, SPIRILLA AND SPIROCHÆTÆ. By DR. F. MEIROWSKY, Köln. One figure and 19 plates in the text. *Julius Springer*, Berlin, 1914.

This small volume of 88 pages is divided into 13 short chapters or subheadings. The first takes up methods; the second concerns the cultivation of the tubercle bacilli in pure culture from the sputum; the third heading takes up the findings concerning the *Bacillus lepræ*; in the fourth chapter, the author takes up his experiments in the pure culture of the *Bacillus paratyphus* and the *Bacillus enteritidis* Gaertner; under the fifth heading is taken up the *Spirillum rubrum* and the *Spirillum tyrogenum*; in the sixth chapter is discussed the present knowledge of the nature and cultivation of spirochætæ, which is followed in the seventh chapter by the results of pure culture of these organisms, their investigation in the dark-field, their possible division, and the staining reactions of spirochætæ; the eighth chapter is devoted to spirochætæ as they are found in the tissues; the ninth is devoted to chicken spirilloses; the tenth chapter is a study of the spirochætæ which occur in ballanitis, and in the eleventh, those that occur in stomatitis; the twelfth chapter is a résumé of all the general spirochætæ life history; and in the last chapter there is a critical survey of all the findings, followed by a very excellent bibliography. Both the diagrammatic plates and the microphotographs are excellently carried out, particularly the latter. This small volume is without doubt a very interesting contribution to modern bacteriology and parasitology, although it contains no striking original contribution.

U. J. W.

SALVARSAN DEATH: ITS CAUSE AND PREVENTION. INTRAVENOUS OR INTRAMUSCULAR SALVARSAN INJECTION? By DR. CARL SCHINDLER. Five plates and one picture in the text. *S. Karger*, Berlin, 1914.

This is a volume of 185 pages, dealing in an interesting fashion with the question of salvarsan death and its possible prevention. The book takes up in order, pharmacological experiments concerning the poisonous qualities of arsenic and of salvarsan and neosalvarsan, and a very critical review of the salvarsan deaths in the human being. The question of thromboses and phleboscleroses is also discussed at considerable length. The intramuscular injection of salvarsan and neosalvarsan is discussed from its various technical standpoints, and at the last the author discusses the advisability of intravenous or intramuscular injections. The question as to the choice of method is left by the author to the reader. The volume is well worth the careful perusal of all those who are giving salvarsan, and makes an attractive contribution to the literature of the chemotherapy of syphilis.

U. J. W.

THE JOURNAL OF CUTANEOUS DISEASES

VOL. XXXII

DECEMBER, 1914

NO. 12

A CASE OF MILIARY LICHEN PLANUS WITH UNUSUAL CLINICAL AND PATHOLOGIC FINDINGS.

By I. R. PELS, M.D., Baltimore.

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(From the Department of Dermatology, Johns Hopkins University, Baltimore, Md.)

THE object in recording this case was the finding of several interesting features in the course of a routine examination, viz.: first, the occurrence of an eruption of almost entire uniformity in size and appearance of lesions; second, the absence of itching; third, the incidental histo-pathologic findings; and fourth, the reaction to tuberculin.

HISTORY.

The patient was a man aged 50, white, unmarried, born in Russia: occupation, bartender.

The family and personal histories were negative except that he had had "running ears" off and on since childhood. His habits had always been moderate.

Eight or nine months previously (May, 1912) he noticed a mild eruption on the flexor surface of the left forearm near the wrist, which he at first thought was prickly heat. Although the eruption did not bother him, he consulted a physician, who attached no importance to it. The eruption spread, but the extent of this was not noticed until he came to the Johns Hopkins Hospital Dispensary about one month before the present examination. He never complained of any itching except upon suggestion. He stated that he was very nervous and at times excitable, and that he became easily worried. He had an occasional headache and mild gastro-intestinal disturbances. He had lost some weight since the eruption began, but his appetite was good, and there was no constipation. He occa-

sionally complained of "kidney pains" in the lower portion of the back, and pains at times in the left elbow on motion. No external applications had been used. Neither frequent bathing nor sea salt-baths had any effect on the eruption.

PRESENT CONDITION. The patient was a fairly well nourished man, blond, of short stature, slightly anæmic looking, with mucous membranes of good color. The tongue was slightly coated, teeth were in bad condition, and the mucous membrane of the mouth was free of lesions except for evidences of Fordyce's disease of the sebaceous glands on the upper lip and left side of the buccal mucous membrane. The tonsils were normal but the pharynx was injected. The nails were normal. The scalp, which itched now and then, showed a mild seborrhœa. On examination, all the internal organs, including the lungs, were found to be normal.

The eruption was distributed practically over the entire body, appearing more profusely in certain regions, especially about the knees (chiefly on the internal aspect just above and below the patellæ), the wrists and forearms, external aspects of elbows, anal region and extending upon the buttocks, and around the ankles. More widely scattered lesions were present on the neck, chest, back, abdomen, upper and lower arms, thighs, scrotum and on the penis (shaft and glans). The face, scalp, hands and feet were quite free of the eruption.

The primary lesion was a papule, and the entire eruption consisted of papules, the large majority of which were about one millimetre in diameter, some being slightly larger and some smaller. They were either round or angular, but mostly the latter, slightly raised and flat, with sloping edges. Many showed distinct umbilication, but there was no scaling present. The lesions were not deeply situated but were rather superficial. No sebaceous or horny plugs were observed in the centre of the lesions, nor on any other portions of the body. In color the eruption was a light purplish brown, showing varying degrees from the purple to brown. The papules had a decided waxy appearance when viewed from an acute angle; and at a distance the eruption suggested the appearance of an acute miliaria without the erythematous background. Here and there the lesions were located about hair follicles.

On the penis, which had been circumcised, the papules were numerous and quite discrete, shiny, and especially profuse in the sulcus coronarius and at the base of the glans, none however being seen in the meatus. In this region they had little if any color except that of the normal skin. On the scrotum, however, they were pinkish,

glistening, and appeared as if embedded in the skin, but they did not exhibit the sago-grain appearance described in other conditions (e. g., lichen nitidus). In the region about the knees, ankles, buttocks and wrists, the papules were arranged in areas, yet the lesions retained their distinct papular characters.

There was little or no confluence of the lesions, and although always discrete, yet there was grouping in some places but no linear arrangement. There were no scratch marks present, nor evidences of infection.

The clinical appearances were those of a typical, rather extensive, mild lichen planus with extremely small papules.

A von Pirquet scarification test was made with old tuberculin on the left arm with a result which was considered a positive reaction. Old tuberculin 1/20000 mgm. by the intradermic (hypodermic) method gave a slight reaction; 1/2000 mgm. also gave a slight reaction, and 1/200 mgm. gave a marked positive reaction. One drop of a one per cent. old tuberculin solution instilled into the right eye (Calmette method) gave no reaction.

The examination of a specimen of urine was entirely negative.

A differential blood count made of a preparation stained by Hasting's modification of the Romanoffsky stain showed in a total of 502 cells counted, the following:

Polymorphonuclears of all types	47.2%
Small mononuclears	43.8%
Large mononuclears	4.4%
Eosinophiles	2.0%
Transitionals	1.6%
Mast Cells	1.0%
<hr/>	
100.0	

Before the cutaneous and other tuberculin tests were made, two separate typical papules were excised by means of the Dreuw pen, from the flexor surface of the forearm, and were fixed in alcohol, mounted by the celloidin method and stained by the usual methods. The section described below was selected from one of those near the central portion of the disease.

HISTOLOGIC FINDINGS.

The section showed a well circumscribed collection of cells located in the papillary layer of the corium and clinging to the under

surface of the epidermis which apparently had lost the interpapillary processes in this area. A hair follicle was at one side of the lesion. The cutis below the lesion was apparently normal. There was a slight depression over the centre of the affected area which explained the umbilicated appearance.

A more detailed description is as follows:

EPIDERMIS. (1) A slight hyperkeratosis in the area of umbilication. (2) A moderate parakeratosis to one side of the papule. (3) Presence of a stratum granulosum which was thickened to the diameter of four or five cells in the area of umbilication. (4) Moderate acanthosis in the same area, the rete cells taking a fainter stain. In some places small round cells were seen among the spaces in the rete layer.

CORIUM. Just between the epidermis and the granuloma area there was a moderate extravasation of red blood cells, not extending however throughout the entire breadth of the affected area. There was a well circumscribed area composed chiefly of mononuclear cells, mostly leucocytic, showing no definite arrangement, but lying among a fair number of blood vessels which showed moderate dilatation and contained the remains of broken down red corpuscles. There were very few plasma cells and only a small number of epithelioid cells with faintly staining nuclei. At one side, in an enlarged interpapillary space, was a large, distinct giant cell with the nuclei arranged at the periphery. This was adjacent to a hair follicle.

Mast cells were not found. The epithelioid cells appeared to bear no special relationship to and exhibited no special arrangement with the small mononuclear cells and the giant cells. Sweat ducts were not seen in the affected area. No areas of necrosis, abscess, or of caseation were noted. An orcein elastic tissue stain showed an absence of elastic fibrils in the affected area.

The histologic findings thus showed appearances similar to those found in typical lichen planus except for the presence of a giant cell and epithelioid cells.

The patient disappeared while under treatment, but reported subsequently that the eruption had disappeared completely two weeks after taking medicine internally (probably arsenic).

REMARKS. There are certain features in these clinical and histological findings which are worth a brief discussion of the relationship which this one case bears to several other dermatoses, viz.: lichen scrofulosorum, the miliary papular syphilide (lichen syphiliticus) and lichen nitidus of Pinkus. This may be done by considering the chief points of distinction in the symptoms, the clinical course

of the disease, and especially the histo-pathology. A brief summary of the first two and a somewhat more comprehensive sketch of the last are therefore appended. Before considering these affections, however, it is necessary to call attention to the acute form of lichen planus (acute milialy lichen planus) as described by Crocker in his *Text Book of Skin Diseases*, Third Edition.

The chief points of distinction of this type of lichen planus are that it may be primary or supervene on the chronic form; it is rare; and usually commences on the legs but may affect the trunk first. It spreads rapidly, the entire body being covered in some instances within twenty-four hours. There are pronounced constitutional symptoms and death may, on rare occasions, finally ensue. Itching is nearly always a prominent symptom and may be very severe. "The papules are usually small, flat, or slightly convex, angular, shining, and of a very bright red, with tendency to irregular grouping;" and when the disease has lasted some time the papules coalesce and become covered with small scales.

LICHEN SCROFULOSORUM. The disease is rare in this country, is most frequent among children, and most common in males. It occurs practically always on the trunk, especially the abdomen, more rarely on the neck and extremities. There is slight itching or none at all. It is characterized by the presence of papules from "a pin's point to a pin's head in size, slightly conical," yellowish or brown or "of a bright red at the very first, fading into pale red or fawn color," even to normal skin color. The arrangement is in round groups, circles, or partial circles, or there may be patches of lesions. Location is round the hair follicles. On older lesions a minute scale may form, and there may even be yellow sebaceous plugs in the centre. The lesions may appear in crops, thus prolonging the disease. There is no scar formation.

The ætiology and histology are not entirely clear. There is nearly always some evidence of tuberculosis in the patient, usually not pulmonary. Some investigators have found tubercle bacilli in the lesions, and have produced tuberculosis in guinea-pigs and rabbits inoculated with material from the diseased tissue. Others found that tuberculin injections aggravated the existing condition. Again others found typical tuberculous changes in the tissues (round and epithelioid cells, and giant cells), the tubercle being always connected with a hair follicle.

MILIARY PAPULAR SYPHILIDE. This includes those types which are located within the hair-follicles ("lichen syphiliticus" and "the small follicular sypilide"). It is a rare manifestation of syphilis,

the latter type occurring more commonly in females (Crocker). It may occur in the first or second year of the disease, and resembles lichen scrofulosorum very closely. There are, however, usually other manifestations of syphilis present. The lesions are located on the head, body and extremities. The papules are convex, varying in size from a small to a large pin-head; pink in color at first, soon becoming fawn-colored, and even taking the normal color of the skin. In arrangement they are "generally thickly crowded together in groups, which may be irregular, roundish, or even in rings, often quite general in their distribution." The lesions further may be papulo-vesicular, papulo-pustular, or acneiform, depending on the "inflammatory effusion" (Crocker).

The histologic picture shows a sharply defined area of infiltration, extending over a space including ten to twenty papillæ, reaching as far as the middle of the cutis, the lowermost boundary being convex. The epidermis is not much involved, as in the chancre. The cell infiltration surrounds and permeates the follicular wall, but does not affect the root-sheaths or break up the structure of the follicle. It is especially marked around the adjacent vessels and only slight among the coils of sweat glands. Giant cells may also be present.

Since our case resembles very closely the disease described first by Pinkus as lichen nitidus, a more comprehensive summary of that disease, with additional reports to date, will be appropriate.

LICHEN NITIDUS.—Pinkus observed his first case in the Breslau Clinic of Neisser, in 1897, and published his first nine cases in 1907. He proposed the name lichen nitidus (a shiny lichen or papule) based on the clinical and anatomical-pathological changes.

The disease occurs chiefly in males, and is located particularly on the penis, lower abdomen, trunk, extremities, neck, and near the elbows, knees, wrists and ankles. The primary lesions are papules, slightly raised, flat, with or without horny plugs in their centres, and sometimes merely depressions. They are chiefly round in shape. The color is that of the normal skin, on the penis, and more of a brownish yellow on other parts; shiny, waxy and translucent, giving at times the appearance of sago grains.

The size is almost uniform, varying from pin head to several millimetres in diameter. There are no scales or crusts present, and the lesions may resemble small flat warts. They are all discrete, there is no tendency to grouping, or to linear arrangement, and there is no localization round the hair follicles or sweat ducts. The lesions remain papules throughout the course of the disease. There are no subjective symptoms whatever, the eruption usually being discovered

by the physician. The course is variable, disappearance being spontaneous or responsive to external treatment. Tubercle bacilli or other bacteria have never been found in the lesions.

The histologic findings show a well defined granuloma in the upper layers of the corium, closely attached to or associated with the sunken rete layer, which is thickened and may be bored through by a plug of cornified epithelium. Between the granuloma and rete there may be an abscess-like collection of polymorphonuclear white blood cells, granular clot and many extravasated red blood cells (probably due to excision and fixation). The lowermost cell layer of the rete lacks cylindroid cells and pigment. The granuloma consists of a collection of epithelioid cells in the centre, where there may be central necrosis, depending on the age of the lesion; giant cells of the Langhans type are profuse and scattered throughout the granuloma; and lastly there is at the periphery a border of small mononuclear round cells which also invade the granuloma and enter even among the inter-spinous spaces of the rete layer. And finally there is a fairly rich blood supply.

Since this description, there have been a number of reports which in the main have corroborated these observations of Pinkus and have added several additional findings. These may be summed up briefly as follows: The eruption may be present without involvement of the penis (Kyrle and MacDonagh, Civatte, Sutton). It may be associated with other eruptions such as pityriasis rosea (Brocq and Fernet) and lichen planus (Civatte). This last observer found the lichen nitidus superimposed on the lichen planus and in certain regions was unable to distinguish the one from the other. He also found grouping of the lesions. Inoculations of animals (guinea-pigs) with material from the lesions have been consistently negative (Arndt, Kyrle and MacDonagh, Sutton, Bachrach, and Dalla Favera). Injections of tuberculin have caused a general rise in temperature, but no local rise or local manifestations (Kyrle and MacDonagh and Bachrach). Instead of the cornified plug or the depression in the centre of the papules, there may be a fine aperture (Arndt). The lesions may have smooth, burnished tops and be of polygonal outline (Arndt, Sutton). There may be confluence of lesions and arrangement in plaques (Kyrle and MacDonagh's case of a girl, one case only). From a histologic point of view, the youngest or freshest nodules show merely round cell infiltration. Pigmented epithelioid cells may be found (Arndt). There is an absence of elastic tissue in the granuloma (Kyrle and MacDonagh, Sutton).

With these facts at hand one can readily exclude lichen scrofulo-

sorum and miliary papular syphilide in the making of the diagnosis of our case. This leaves the diagnosis between lichen planus and lichen nitidus. The appended table showing the chief differential features in the two affections should be of value in determining the essential characters of this case.

LICHEN PLANUS.	LICHEN NITIDUS.
Involvement of the mucous membranes, 40 to 60 per cent. (quoted by Fordyce).	No involvement of the mucous membranes.
Uniformity in size of lesions rare. They become larger on long standing.	Lesions uniform in size.
Lesions are angular or polygonal; rarely round.	Lesions are round; more rarely polygonal.
The arrangement may be linear, grouped or confluent; especially circinate on the penis (Pinkus); and they may be located round hair follicles.	Always discrete, never confluent, may be grouped; never circinate, and never located round the hair follicles.
There may be scaling, crust formation, and also verruciform types.	There is no scaling or crust formation. There is a central horny plug, a fine aperture, or merely a depression.
The color is pink or purplish.	Color is that of the skin or brownish yellow.
They are shiny or waxy but not translucent on glass pressure.	Dull or moderately shiny, but translucent on glass pressure, resembling sago grains or small flat warts.
Itching is moderate or very severe.	No itching whatever.
Response to internal medication such as arsenic, dilute nitro-hydrochloric acid, etc.	No response to internal medication, but some to external remedies.
Granuloma without the features of the tubercle, and not so circumscribed, although there may be giant cells and epithelioid cells present (Pinkus, Kaposi, Ledermann, Fordyce).	Circumscribed granuloma, with the essential features of the tubercle, viz.: epithelioid cells, Langhans giant cells, small mononuclears, and sometimes central necrosis.
Giant cells are rarely present.	Giant cells are numerous and always present.
Cavity between the rete and infiltration may be present, but not an abscess like space.	Abscess cavity when present separates rete from granuloma, and contains polymorphonuclear leucocytes.
Polymorphonuclear leucocytes are frequently present.	These may be present at edge of granuloma, but are usually absent.

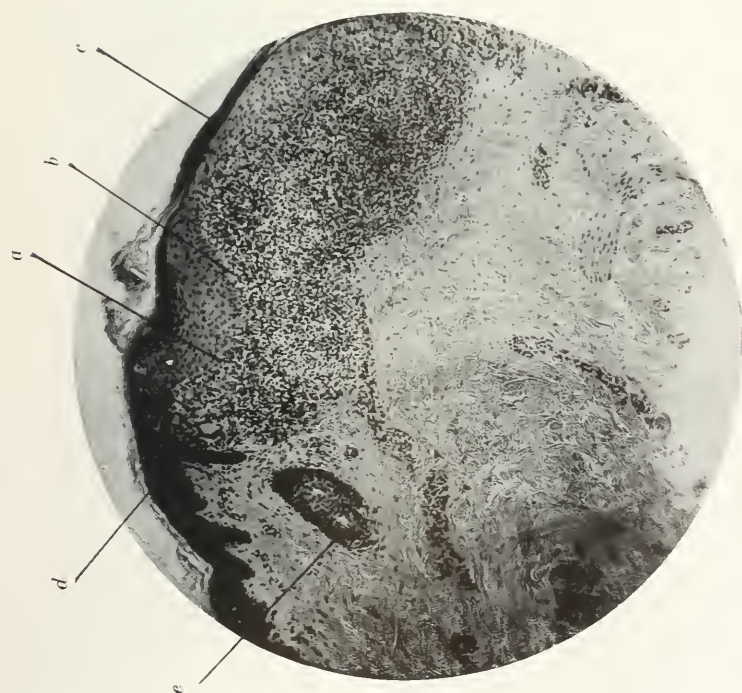


Fig. 1.

Lichen planus. Low magnification.

- a* indicates and passes through thickened rete and thickened stratum granulosum. Note the faintly stained rete cells and the absence of interpapillary rete processes.
- b* indicates moderate gap between the rete layer and the granular area. Here are broken-down red blood cells.
- c* indicates moderate parakeratosis.
- d* indicates single giant cell lying among small mononuclear leucocytes and epithelioid cells.
- e* indicates a portion of a hair follicle.

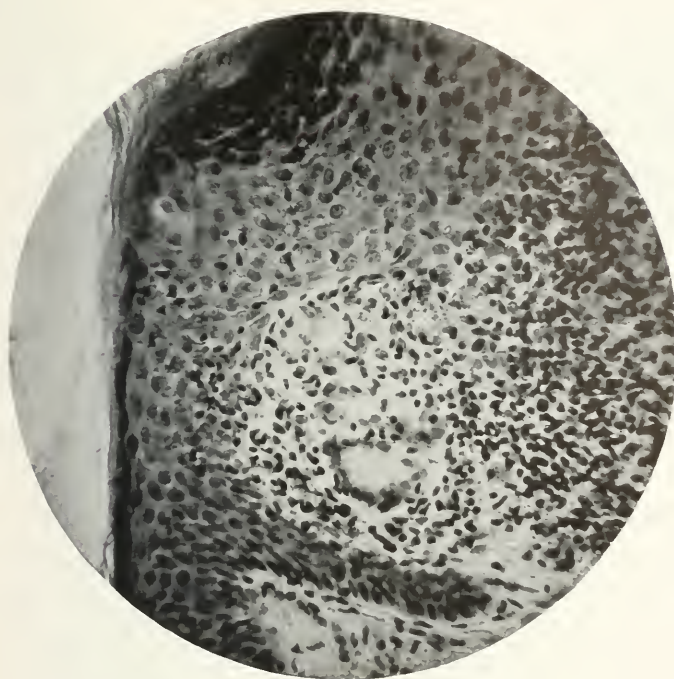


Fig. 2.

Lichen planus. High magnification.

- Shows giant cell near rete process, and shows other characters of the granular area, such as small mononuclear leucocytes and epithelioid cells.

SUMMARY. From the clinical standpoint all the evidence seems to point to our case being one of a miliary lichen planus, because of the character of the primary lesions which consist of very shiny or waxy, umbilicated, polygonal, pinkish or purplish papules, some of which were situated round hair follicles. The response to internal medication (disappearance in two weeks with crust formation after taking medicine) seems also to support the diagnosis. Yet the uniformity in size, with no tendency to change, the absence of confluence or of linear arrangement, the occurrence on a circumcised individual, and the absence of itching simulates lichen nitidus very strongly. And the local reaction to tuberculin is significant in favoring the presence of the tuberculoid granuloma of this disease.

When considered from the histologic standpoint—the occurrence of giant cells, epithelioid cells, and small mononuclear cells in no definite relationship—the disease simulates lichen planus of the unusual or rarer type. Scarcity of polymorphonuclear leucocytes, absence of elastic fibrils and the elements of a tuberculous granuloma, together with an area of extravasated red blood cells beneath the epidermis, again point to likeness to lichen nitidus.

Finally, our case may then be considered as one of miliary lichen planus with unusual clinical and histological features of such types as suggest a close relationship to the disease originally described by Pinkus as lichen nitidus. And if one considers the unusual case demonstrated by Civate before the Société Française de Dermatologie et de Syphiligraphie, showing the presence of both diseases, one is impressed more with the above suggestion.

In conclusion, I desire to express my thanks to Dr. T. C. Gilchrist for his valuable suggestions. He saw the patient and proposed the term miliary lichen planus as the most descriptive of the condition present.

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A CLINICAL, PATHOLOGICAL AND EXPERIMENTAL
STUDY OF THE LESIONS PRODUCED BY THE
BITE OF THE "BLACK FLY" (*SIMULIUM VENUS-*
TUM).

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PART TWO.

[This paper is intended to be a continuation of the study of the bite of the black fly, *Simulium venustum*, presented by the writer in the November issue of THE JOURNAL, page 769. The material here included comprises the histopathology of the lesion and the results of experimental work with the toxic agent, using alcohol-preserved material.]

HISTOPATHOLOGICAL STUDY—MATERIAL AND METHODS.

IN order to carry out a pathological study of the lesion produced by the black fly, the author allowed himself, as an apparently typical non-immune individual, to be bitten by flies on various parts of the body. He then excised lesions at different stages of their development, and preserved the material in five per cent. formalin. The imbedding was done in paraffine and the sections cut serially at 8 to 10 microns. The following staining methods were employed: (1) polychrome methylene blue (Unna), (2) polychrome methylene blue (Unna) decolorized with acid alcohol (Gilchrist's technique), (3) polychrome methylene blue (Unna) and eosin, (4) hematoxylin and eosin, (5) orcein (neutral), (6) Van Gieson, (7) carbol-methyl-green pyronin (Pappenheim). Polychrome methylene blue (Unna) followed by eosin proved especially satisfactory as a routine stain, inasmuch as it differentiates eosinophiles and mast cells in the same section. The decolorizing of sections stained with Unna's polychrome methylene blue by the use of alcohol acidulated with hydrochloric acid, instead of by glycerine ether, was suggested by Gilchrist¹ in connection with his studies of urticaria, and forms an excellent method for the rapid estimation of increase in the number of mast cells. If properly carried out the mast cells stand out against a background so decolorized that only faint outlines of cutaneous structures are visible, and the distribution of the cells in question can be noted at a glance.

The material obtained by biopsy consisted of the following lesions:

1. LESION A. Left knee, external surface. Excised four hours after the bite, which exhibited the characteristic hemorrhage with a well marked subcutaneous ecchymosis or punctum. At the time of excision, the lesion consisted of the central hemorrhagic punctum, one millimetre in diameter, and a mildly inflammatory areola about three millimetres in diameter. Except for the slight elevation of the punctum there was no wheal visible and only the slightest palpable induration.

2. LESION B. Anterior aspect, left shoulder. Full time bite. Characteristic hemorrhage and small punctum. Suggestion of vascular dilatation noted externally during and after bite. Areola reached five millimetres in diameter in two hours, first signs of papule appeared in one hour. Following morning was nearly a centimetre in diameter, becoming more marked on manipulation. At the end of twenty-four hours, the lesion being apparently stationary, it was excised. Symptoms had been negligible.

3. LESION C. Left wrist anteriorly. Typical bite. In twelve hours had developed a hard papular elevation, six millimetres in diameter, with typical punctum. No symptoms. In twenty-four hours a tense flattened vesicle, about two millimetres in diameter, had developed upon a firm, mildly inflammatory base. The lesion was then excised. This was a typical, rapidly developing lesion.

4. LESION D. Left forearm, internal surface. A typical bite. Had developed into a papulo-vesicle in twenty-four hours and remained unruptured until excision. On the second and third days the itching had become severe. On the third and fourth days the base of the papulo-vesicle became less marked and the central portion of the lesion more circumscribed and elevated although still shotty to the touch. A wheal with marked inflammatory areola would appear on rubbing, subsiding when irritation ceased. Periodic attacks of extreme pruritus, especially severe in the morning. On the morning of the fifth day, biopsy was performed, the lesion being typical and fully developed, and one which if excoriated by scratching would have formed the characteristic, persistent weeping papule previously described.

5. LESION E. Scar-like area at site of lesion, eighteen days old.

HISTOPATHOLOGICAL FINDINGS.

The following is a brief description of the histopathology of each of the above lesions.

LESION A. (4 hours). EPIDERMIS, changes negligible except in the region of the punctum. Slight œdema of the Malpighian layer. CORIUM, marked perivascular œdema, with vascular dilatation and dense polymorphous perivascular infiltrate. Diapedesis of eosinophiles through the capillary walls (see Fig. 2) observed. Many capillaries choked with polymorphonuclear neutrophiles, eosinophiles and lymphocytes, preponderance in the order named. Two to five eosinophiles in most of the capillaries. The perivascular infiltrate consisted largely of polymorphonuclear neutrophiles. No hæmorrhage, no changes in capillary endothelium. Mast cells greatly increased in number, concentrated especially about sebaceous and sudoriparous glands, although also present in the perivascular infiltrate and lying in the adventitia of the larger vessels and closely applied to the capillary walls. About the sebaceous glands twelve to fifteen mast cells could be counted to the $\frac{1}{12}$ oil immersion field. In addition to the usual forms, a few cells with basophilic granulations, suggesting basophylic myelocytes quite as much as the typical mast cells of the cutaneous tissues, were found near the punctum. PUNCTUM. Sections through this region show epidermal changes in the form of a boggy, œdematous Malpighian layer, with vacuolated prickle cells, the nuclei of these cells being reduced to thin, pyknotic, eccentrically-placed crescents. The basal cells are similarly involved. Cutis shows hæmorrhage, the blood cells being intact but with considerable deposits of yellowish-brown pigment accumulated about the capillaries. The infiltrate shows an overwhelming preponderance of polymorphonuclear neutrophiles, not only perivascular in distribution, but scattered throughout the hæmorrhagic area. Small round cells are also numerous, outranking the eosinophiles. Mast cells present in large numbers. Nothing to suggest a central necrosis at the point of puncture.

It should be mentioned at this point, for the sake of clearness, that the eosinophiles spoken of in these descriptions are the coarse granular eosinophiles of Ehrlich or coarse granular oxyphiles (Kanthack and Hardy). They conform on the whole to the polymorphonuclear form of that cell. Considerable numbers of them, however, show their close relation to the eosinophilic myelocyte, their cytoplasm being relatively scanty and the nucleus single, rounded, reniform or saddle-bag shaped. The degree of pyknosis places most of them in the polymorphonuclear group. Many of them show double nuclei, which in a few cases resolved themselves into U-types that had been cut across the ends.

LESION B. (24-hour papular lesion). EPIDERMIS, shows the

intra- and extracellular œdema previously noted. The process is so extensive that the basal layer is broken up in places and the pigment cells scattered and fragmented. True vesicle formation has occurred but is not conspicuous. The vesicles are small and seated in the rete Malpighii. The contents include eosinophiles of an apparently immature type with large single nuclei and a relatively small amount of granular cytoplasm. Epidermis infiltrated with polymorphonuclear cells. An exudate between the stratum corneum and stratum lucidum contains fibrin and polymorphonuclear and mononuclear eosinophiles. CUTIS. Marked general œdema. Heavy infiltration of the papillary body with polymorphonuclear cells, large and small mononuclears, and a few young connective tissue cells. Eosinophiles are relatively few at the periphery of the lesion and in the papillary bodies, but near the punctum and the central zone of infiltration they become numerous, arranged in rows along the collagenous bundles and distributed about the vascular supply. They are all of the immature or young type, the cytoplasm and granules being dense and closely packed and the nucleus, usually of the reniform or saddle-bag type, occupying half or more of the cell. Fragmented and pale-staining collagenous bundles were noted. Mast cells of the same types and distribution as in the 4-hour lesion. PUNCTUM. Section through the actual point of puncture shows the epidermis broken through and the gap filled with a conical plug of fibrin, pyknotic polymorphonuclear cells, red blood cell detritus and a number of eosinophiles. The œdematous tissue of the papillary body has also been pushed upward and contains a fibrinous exudate with eosinophiles. There is a small vesicle to one side of the punctum, but most of the reaction is in the cutis. The œdema of the papillary bodies is so marked as to suggest that this lesion would have followed the typical course, had excision been delayed.

LESION C. (24-hour papulo-vesicle). However applicable the term vesicle may be in the clinical description of the lesion, it proved on pathological examination to be somewhat of a misnomer. Scarcely any true vesicles were found in the epidermis. The papillary bodies on the other hand were found to be the sites of a remarkable localized œdema, resulting in a ballooning out of the papilla with conversion of the rete pegs into slender septa and bulging and thinning of the epidermis above the papillæ. The œdema was so intense that the sheen of fluid as seen in the lesion *in situ* gave the picture of a vesicle. The writer has adopted the term pseudovesicle as more accurately descriptive and will refer to the picture in question by this term in further discussion. EPIDERMIS (pseudovesicular lesion). General

œdema of the Malpighian layer. While the basal layer is intact in places, most of it is œdematous, the cells swollen and distorted, the nuclei scarcely staining, angular and crowded to the side of the cell. Many of the pigment cells are fragmented, and over the summits of the pseudovesicles, they seemed to have disappeared completely with the disintegration of the basal layer. The cells of the Malpighian layer in these situations appear to "fade out" into the œdematous substratum, losing both outline and staining reaction. The inter-papillary processes are elongated and often narrowed to the point of obliteration between the swollen papillæ. At the tips of the larger and less distorted rete pegs the integrity of the basal layer and pigment cells is preserved. Relatively little cellular infiltration of the epidermis was observed. CUTIS. While there is a moderated general œdema of the cutis, the papillary body is the seat of the tremendous localized distention with fluid characterized above as the pseudovesicle. The thin roof of cells of the Malpighian layer rests upon a faintly-staining reticulum, representing the remains of the ballooned papilla and the detritus of the deeper layers of epidermis. Connective tissue stains show the elastic tissue of the papilla to have been largely forced back upon the cutis, leaving only cobweb-like remnants, in the meshes of which are a few œdematous connective-tissue cells, pale-staining nuclei and scattered eosinophiles. The destruction occasioned by the œdema is in marked contrast to the relatively intact condition of the remainder of the cutis, where only slight fragmentation of the collagen was noted. Vascular dilatation is again conspicuous in the subpapillary network and deeper vessels, with perivascular round-cell infiltrate. Notable absence of eosinophiles in the vessel lumina. Concentration of eosinophiles toward centre of lesion again noted, cells of the same type as those previously described.

Both in this lesion and the preceding one, careful search for plasma cells in the Pappenheim-stained sections, failed to reveal any cells of this type.

LESION D. (fifth day mature lesion). The findings in this lesion were a decided surprise to the writer. Instead of a granuloma or a massive infiltrate of the fleshy type, the pathological picture proved to be an elaboration and extension of the pseudovesicular stage. The periphery of the lesion suggests Lesion C except that the eosinophilia was more marked. The centre of the lesion shows the essential pathological processes at their height (Figs. 1 and 3). EPIDERMIS, shows the changes above detailed. CUTIS. The lace-like tracery of parallel and cross strands in the pseudovesicles (papillary

bodies) is admirably demonstrated by the picric acid of the Van Gieson stain. The œdema here is perhaps less intense than in the earlier stage. Vascular dilatation, especially in the subpapillary rete, is very striking and the general œdema is more pronounced in the vicinity of the vessels. The infiltrate at the periphery of the lesion is again largely perivascular, but infiltrating cells become more widely distributed toward the centre. Mast cells are distinctly less in number than in the earlier stages, especially in the four-hour lesion. The distribution remains the same, but the cells seem larger and the granules more scattered. Eosinophiles occupy an increasingly prominent part in the picture as the centre of the lesion is approached. Near the site of injection of the toxin especially, they show distinct changes as compared with the compact forms of the earlier stages. The granules are now more scattered and the body of the cell larger as compared with the nucleus. The Pappenheim stain brings out the organization of the perivascular infiltrate, which is now well under way. Considerable numbers of embryonal connective tissue cells were demonstrable among the round cells. These cells are large, with pale blue nuclei and a reticulated cytoplasm which takes the pyronin red. Karyokinetic figures were noted occasionally in these cells. Only occasional undoubted examples of plasma cells could be found at this stage. The organizing process was most active at the periphery of the lesion, and confined to perivascular and periglandular infiltrates. The region of the PUNCTUM was of special interest. The puncture had evidently been made near a hair follicle, but the central infiltrate extended much deeper (Fig. 1). A funnel-shaped plug of fibrin and nuclear detritus above the stratum granulosum represents the externally visible part of the punctum. The epidermal changes and the pseudovesicles conform to previous descriptions. The subpapillary layer of the cutis was infiltrated with eosinophiles, distributed in rows or groups of five or ten along the connective tissue bundles. There was a notable absence of perivascular accumulations of these cells in this immediate region, the perivascular infiltrate consisting of round cells. The eosinophiles in the upper strata took the eosin well, but, in marked contrast to the round cells, their nuclei took the methylene blue very poorly. The eosinophiles in and around the central infiltrate, on the other hand, seemed more normal. All the eosinophiles were of the older, less compact type.

The central infiltrate itself presented an almost unique picture. Eosinophiles were packed solidly side by side in some places and over considerable areas the percentage might be conservatively estimated

as between fifty and seventy per cent. By way of roughly estimating the number of eosinophiles, two separate focal planes in the field of Fig. 3 were counted, the two being so far different in depth that no cells seen in the one were in focus or visible in the other, (section 10 microns thick). In the upper plane, 70 eosinophiles were counted within the field of a Leitz $\frac{1}{2}$ oil immersion objective, ocular 4. In the lower plane, without moving the section, 56 were counted, making a total of at least 126 eosinophiles recognizable as such within the field of this objective. The eosinophiles were of the types described as characteristic of these lesions from the start. There was notable absence of polymorphonuclear neutrophils. The principal massing of the eosinophiles in the central infiltrate was peripheral, the core of the mass consisting largely of round cells, among which a few embryonal connective tissue cells appeared. The rather strict perivascular distribution of the small round cells was in marked contrast to the wide range of movement of the eosinophiles, cells of the latter type being found even in the sebaceous glands. Free eosinophilic granules were found in the central infiltrate (Fig. 3) and clumps of such granules suggesting disintegrated cells or degenerated forms.

LESION E. The relative insignificance of the changes in the scar was of interest in contrast to the extent of the process when at its height. Eighteen days after the bite there was still some slight perivascular infiltrate, with fibroblastic proliferation about the capillaries. Occasional eosinophiles were found in the lumina of the vessels. Slight fibrosis was apparent in the cutis, the epidermis showed some proliferation of the rete Malpighii with only partial restoration of the basal layer and disappearance of the rete pegs in the centre of the affected region. Oedematous forms were still present among the cells of the rete Malpighii and among the basal cells. The extent of the loss of pigment in the centre of the lesion could not be ascertained.

RÉSUMÉ AND DISCUSSION OF PATHOLOGICAL FINDINGS.

The following are the salient histopathological features of the lesions produced by the black fly.

1. The principal pathological changes induced by the toxic agent occur in the corium.

2. These changes consist primarily of vascular dilatation, with perivascular oedema, becoming general, and a polymorphous perivascular infiltrate.

3. A remarkable local eosinophilia is one of the most distinctive features of the lesion. The eosinophiles are hamatogenous in origin so far as these preparations show. They are largely of the polymorphonuclear type. In the earlier lesions, however, the eosinophiles are "young" and approach the type of the eosinophilic myelocyte. The nuclei, if single, are oval, reniform or saddle-bag shaped. Many of them are double. The granulations show the cells to be coarse granular eosinophiles. The appearance of these cells in the local blood stream in the earliest stages is evidence of the intense chemotactic effect of the poison upon eosinophiles. They at once leave the vessels to concentrate themselves toward the central part of the lesion and distribute themselves through the tissues in what is apparently the zone of diffusion of the toxic principle. In the central infiltrate, occurring at the point of puncture, the number of these cells is so great as to present an almost unique picture. The arrangement of the eosinophiles around the periphery of the central mass, around perivascular collections and free in the surrounding tissues suggests that they play an active part in disposing of the injected poison. The presence of free eosinophilic granules and degenerated forms of these cells further suggests a defensive rôle.

4. A very marked increase in the number of mast cells occurs early, synchronously with the vascular dilatation. The increase is comparable to that in urticaria pigmentosa. The mast cells are distributed in greatest numbers around the sweat and sebaceous glands and around the blood vessels. Atypical myelocyte-like forms are present. The mast cells decrease in number in the older lesions.

5. There is a polymorphonuclear leucocytic element in the infiltrate, which, while prominent in the first twenty-four hours, becomes insignificant later.

6. There is a very marked infiltration of small round cells from the earliest stages. While a few of these are found in the tissues at large, the majority remain perivascular and at the core of the central infiltrate.

7. Still another distinctive pathological change in these lesions consists in a remarkable localized œdema and swelling of the papillary bodies, superimposed upon the general œdema apparent throughout the lesion. This localized process results in the formation of cuticular vesicles or pseudovesicles, with thinning of the overlying epidermis, obliteration of the rete pegs and slight fibrinous exudation into the pseudovesicle. The stroma of the papilla is ballooned out to form a cobweb-like tracery of parallel and cross

strands. Cellular infiltration of the papillary body, often marked at first, becomes insignificant as the pseudovesicle develops. The early infiltrate is polymorphonuclear. Later it is succeeded by scattered round cells and eosinophiles.

8. An element of chronicity in the evolution of these lesions manifests itself in the development of embryonal connective tissue and fibroblastic proliferation in the perivascular infiltrate.

9. Epidermal changes are not marked, and are entirely secondary to the process in the cutis. They consist of occasional true vesicle formation, moderate intracellular oedema involving the Malpighian layer and the basal cells, and pigmentary changes. The last-mentioned are apparent in the hyperpigmentation or depigmentation of the scar.

10. The pathological changes thus enumerated leave only a slight residuum of fibrosis in the cutis, especially about the vessels, and the pigmentary changes mentioned.

11. No direct evidences of bacterial or protozoal agency in the process were apparent.

In correlating the findings in these lesions with those in other dermatological conditions, attention may be called to the work of the following authors. Gilchrist,² in his studies of urticaria factitia, called attention to the picture of acute inflammation presented by the wheal, and the rapidity with which polymorphonuclear and mononuclear leucocytes appeared at the site of the lesion, apparently from the blood stream. He noted also the increase in the number of mast cells in the experimental lesion. In the factitial wheals produced in a case of urticaria pigmentosa (Gilchrist³), he noted an increase of mast cells over the number usually present, and that this increase was conspicuous around the vessels. A tendency to the localization of mast cell increase about the vessels was noted by the writer in the fly bite, but less marked than that about the sebaceous glands. The presence of an early polymorphonuclear element in the infiltrate of the fly bite is in accord with the picture of a simple urticaria. It is, however, later supplanted entirely by a special chemotactic reaction, eosinophilia, called forth by the particular toxic agent injected by the fly.

Local eosinophilia in skin conditions has had a liberal share of attention from investigators, notably in association with pemphigus (Neusser,⁴ Kaposi,⁵ Bettmann⁶), and dermatitis herpetiformis of Duhring (Darier,⁷ Leredde and Perrin,⁸ Hallopeau and Lafitte,⁹ Gilchrist¹⁰). Bettmann also demonstrated the condition in one case

of herpes zoster intercostalis, early in the attack. Bettmann's experimental work on eosinophilia in artificially produced bullous lesions is of some interest in this connection, since he used as a vesicant the official cantharides plaster. Cantharidin would seem from his experiments to have a chemotactic effect on eosinophiles not unlike that exerted by the toxin of the black fly.

In regard to the histogenesis of the eosinophiles in the dermatosis in question, as indeed in all pathological conditions in which local eosinophilia has been demonstrated, a number of ideas have prevailed. A convenient summary is given by Howard and Perkins¹¹ in connection with the study of eosinophilia in a variety of general pathological conditions. To the view that they develop from polymorphonuclear leucocytes (Schultze, Zappert and others, quoted by the above authors) nothing in the writer's preparations gives support. Such polymorphonuclears as appear in the early stages, appear coincidently with eosinophiles, assume a more superficial distribution and are to some extent apparently destroyed by fragmentation, etc. The conception of local formation of eosinophiles, espoused by Neusser and Rille¹² among others, aside from the fact that nothing suggesting such a process was observed, would not appear to conform to the apparent hamatogenous origin indicated by such pictures as that in Fig. 2. The view proposed by Howard and Perkins that eosinophiles develop from plasma cells finds no support in these sections. The hamatogenous origin accords best with Ehrlich's conception of this cell as a derivative of the eosinophilic myelocyte, and the presence in the early stages of "young" mononuclear forms approaching morphologically the type of the eosinophilic myelocyte, makes this view the more acceptable.

In connection with the eosinophilia in dermatitis herpetiformis, the writer was much interested to note a striking parallelism between the histopathology of the vesicular lesion produced by the black fly as he observed it, and Unna's¹³ and Gilchrist's¹⁰ descriptions of the pathological picture in the vesicular stages of Duhring's disease. Unna calls attention to the fact that the vesicle of dermatitis herpetiformis really consists of œdema with cellular infiltration of the papillary body, the epidermis playing a relatively passive rôle. In some papillæ the œdema predominates, giving rise to "club-like swellings of glassy, transparent appearance." Gilchrist's more detailed description includes the eosinophilia which Unna apparently failed to note. He emphasizes as essential features of the pathology of the lesion of dermatitis herpetiformis the primary involvement of the cutis, the formation of vesicles in the corium from œdema of the

papillary bodies, obliteration of the rete pegs by pressure, with stretching of the otherwise passive epidermis, and the formation, secondarily, in the latter, of small true vesicles. A coarse fibrin network in the vesicle is described. The eosinophilia in the vesicle, the distribution of the eosinophiles in the cutis around the dilated capillaries, the preponderant mononuclear perivascular infiltrate with a lesser number of polymorphonuclears, all accord more or less with the picture of black fly bite. The fly lesion does not, however, present so striking a picture of massive polynuclear infiltration into the papillary body as Gilchrist describes for dermatitis herpetiformis. In lesion B (24-hour papule), however, there was a marked infiltration of the papillary body with polymorphonuclears, large and small mononuclears and a few young connective tissue cells (see page 832). The writer regrets that lack of material from a case of dermatitis herpetiformis prevents his making more searching comparisons. It is at least suggestive that an obviously toxic reaction on the part of the skin following the bite of a fly, should give rise to a picture apparently so strikingly similar to that characteristic of a known dermatosis regarded by many writers as of neurotic origin. Such a coincidence might lend some additional color to the view that a circulating toxin is prominent among the aetiological factors in dermatitis herpetiformis.

The work of Schamberg on "Grain itch" (*Acaro-dermatitis urticarioides*) while dealing with a dermatosis produced by one of the *Arachnida* is of interest in this connection, inasmuch as he includes a description of the histopathology of a vesico-pustule upon an urticarial base, produced by a blood-sucking parasite which does not invade the skin, but produces its effect through the injection of a toxic agent. The lesion is essentially urticarial in character, and the vesicle seems not to be especially distinctive. There is no pseudovesicle formation or specially conspicuous oedema of the papillae and no mention is made of local eosinophilia in Schamberg's description. A very definite eosinophilia in the blood was recognized in a number of his cases, however. Professor Schamberg suggested to the writer, in connection with the present study of the black fly bite, that differential counts be made. The suggestion unfortunately came too late to be properly carried out. However, through the courtesy of Dr. C. B. Stouffer of the University Health Service, physician to the Engineering Camp and Biological Station of the University of Michigan at Douglas Lake, the writer was given the opportunity of examining smears from the blood of a patient who had received some fifteen bites on the neck, ears and arms about

twenty hours before the blood was drawn. The cervical glands were enlarged, tender and painful, the sites of the lesions swollen, red and intensely pruritic. There was no temperature. The differential count was as follows:

Polymorphonuclear neutrophiles	57.5%
Small mononuclears	32.5%
Large mononuclears	5.5%
Transitionals	3.0%
Eosinophiles	1.5%

Taking this result at its face value and not regarding it as adequately controlled or conclusive, it is certainly a matter of interest that so remarkable a local eosinophilia as that present in these lesions as here studied, should have no counterpart in the general circulation. It is possible that more extensive involvement, comparable to that in Schamberg's cases, would have shown a different result.

Reference has already been made to Langer's study of the bee sting and the poison of the honey bee. Langer¹⁵ gives a full account of the clinical course of the sting, describing three stages. The progressive stage occupies $1\frac{1}{2}$ to 2 hours and is marked by pain, circumscribed ecchymosis, wheal formation, and œdematous swelling. The stationary stage, $1\frac{1}{2}$ to 2 days, is marked by more or less extensive swelling of the surrounding parts. This is followed by the regressive stage, 8 to 14 days, characterized by subsidence of the general œdema, itching, increasing prominence and later disappearance of a nodule at the site of the sting. Langer notes in his comments on immunity, the variable reaction and even total immunity of certain individuals, and the persistent hypersensitiveness of others, and the persistence of local tendency to reaction about the eyes, lips, nose, ears and genitals, even after such a site as the forearm has become immune. His account of the histopathology (Langer¹⁶) is rather brief. A central necrosis occurs, which does not appear until about three hours after the sting. A leucocytic wall surrounds this necrosis, in which the normal structure of the tissue is lost. The surrounding skin shows marked œdema, moderate vascular dilatation and round cell infiltration. No mention of eosinophiles is made. During succeeding days the leucocytes migrate from the leucocytic wall out into the affected tissues. This Langer interprets, as does the writer in the case of the black fly, as evidence

of the active part taken by certain special cells in the gradual neutralization or elimination of the toxic agent.

EXPERIMENTAL STUDIES.

The writer desires to offer as a foreword to the last division of this paper, a brief explanation of the conditions under which the experimental work has been done and a comment on the results. The writer had barely begun to appreciate the interesting possibilities of experimental work on the fly lesion when his vacation came to an end. It was accordingly impossible, since the fly would scarcely live long enough in captivity to stand shipment to Ann Arbor, to do any work upon fresh material. In the second place the fly could not, with the available time and means, be caught in quantities. In order to secure flies at all it was necessary for the observer to go into the underbrush and allow flies to alight upon him. A small vial was then inverted over the fly, which at once flew up into the top. A quick transfer to the mouth of a vial of alcohol was made and a sharp tap usually knocked the fly down into the alcohol. While a single fly was being caught, a number of other had begun independent operations upon the observer. The writer succeeded in catching and preserving about thirty flies in one afternoon. The use of the familiar "fly-dopes" for protection defeated the purpose of the hunt by driving off the flies. An appreciation of the element of personal discomfort in the collection of material leads the writer to extend special thanks to Miss Frances J. Dunbar of the University Biological Station for a supply of about two hundred flies caught for him after his departure from the infested region. The discovery was made too late that the flies could be anaesthetized by a little ether on cotton in the bottom of the catching vial and that in this way dry material could be procured, free from such objection to its experimental reactions as might obtain in cyanide-killed material.

The actual experimental handling of the fly, which in the preserved state does not as a rule exceed two millimetres in length, was a matter of the greatest difficulty with so small a stock. It is obviously impossible to withdraw the pure venom from the secreting and storage apparatus, and examine its properties. Efforts to extract the toxic agent had to be made upon ground material and the menstruum filtered through cotton in a capillary pipette. The repetition of experiments and confirmation of results was impossible. To cover possible losses of the toxic agent in manipulation of the ground material, not less than five flies were used at a time, the

usual number being ten. No means of standardizing amounts or introducing accurate quantitative measurements of the toxic principle could be employed. That it produced a reaction at all under such adverse conditions appeals to the writer as evidence of the remarkable toxicity of the substance. These considerations introduced an element of crudity and approximation into the work which the author fully appreciates, but which was unavoidable under the circumstances. The results are therefore offered with reservation, as tentative, not final, and as requiring confirmation, supplementing and extension.

Before taking up the writer's experiments, reference should be made again to the work of Langer.^{16, 17} This investigator used as many as 25,000 bees in preparing his material. The drop of venom is visible macroscopically, and its chemical and physical properties can be investigated direct. Langer's work covers a wealth of detail relating to the physiological chemistry and toxicology of the poisonous agent. His principal conclusions are as follows: the active principle of bee poison is "an organic base, precipitated by alkalies, especially ammonia, giving the general reactions for alkaloids, and not affected by a temperature of 100 degrees Centigrade, moist or dry." It exists in the bee in combination with an acid, probably formic acid, a volatile aromatic body, and an albuminous substance. None of these other elements, however, has the specific toxic effect. The combination as it exists in the bee is easily soluble in water and in alcohol and is not affected by drying. It does not deteriorate in sealed tubes but is destroyed in exposed solutions by putrefactive organisms. It is not decomposed by $\frac{1}{10}$ normal sulphuric acid or by $\frac{1}{10}$ normal sodium hydroxide, showing the typical reactions after neutralization. It is possible to separate the toxic principle from the albuminous substance and the acid with which the base is combined, and obtain it pure. The local effects of the poison have been mentioned. Its systematic elimination is irritating to the kidney after subcutaneous injection. Intravenous injection produces an initial fall in blood pressure, a second dose produces a marked rise. Lethal doses give rise to clonic convulsions alternating with paresis and exitus from respiratory failure. The necropsy findings may be summarized as indicating an intense hæmorrhagic process, strongly resembling the effects of snake venom, to which Langer believes the toxic agent to be closely related. Pepsin and hydrochloric acid in the concentration of 1 decigram of the former in 1 cc. of a 0.2% solution of the latter, inactivated 1 decigram of the dried poison at once. Weaker solutions only partially destroyed

it. The alkaloid reactions also disappeared, showing the change to be chemical as well as physiological. Langer attributes the effect exclusively to the ferment, since the boiled pepsin = HCl mixture had no effect whatever on the activity of the poison. Pancreatin in alkaline solution, even though the poison was precipitated, destroyed the toxic principle. Diastase and papaïn had a similar effect, but invertin had no effect. Langer points out that these results accord in general with previous observation of the destruction of animal and bacterial toxins by the hydrolytic ferments of the gastrointestinal tract. Langer believes the chemical change may ultimately be shown to be that of taking up an hydroxyl molecule under the action of the ferment. Finally Langer demonstrated the hæmolytic action of the toxin upon red blood cells and its direct relation to the amount of the toxin present. He then demonstrated that blood serum exerted an inhibitory effect upon this laking action of the poison, and that serum itself, in varying concentrations, had a quantitative effect in destroying the activity of the poison. In all his experimental work Langer used the conjunctival reaction of the rabbit in estimating the activity of the bee poison and the isolated toxic principle.

The writer's earlier experiments were performed upon himself. Through the very cordial coöperation of Professor Wile, who submitted himself as a subject, and of Dr. F. E. Sencar, the Resident on this service, who also volunteered, the experimental field was extended. Dr. Sencar proved to be relatively immune to the toxic agent under the conditions of the experiments, a point which is interesting in view of the fact that he has never reacted to mosquito bites. Professor Wile and the author, on the other hand, proved to be sensitive, the former the more so of the two.

The first efforts were directed toward seeing whether the preservative (96% alcohol) in which the flies were kept, contained the toxic agent or not, and if not, whether it could be extracted from the preserved fly by grinding it up. The material used was from twenty to thirty days old. The alcohol was colored distinctly yellowish as compared with the control preservative.

EXPERIMENT I.

The preserving alcohol was evaporated to a small bulk at between 45 and 50 degrees Centigrade (2 hours). Two or three minims of a straw yellow fluid were obtained, the residue along the sides of the dish being translucent and gummy. Inoculation was

made with a von Pirquet scarifier on the writer's forearm, using one drop of this yellow fluid rubbed in with a glass rod. A blank scarification and one for 96% alcohol (Biological Station) was made. The site of inoculation showed no distinctive reaction, and both it and the controls were entirely negative at the end of 48 hours and remained so.

EXPERIMENT II.

The remainder of the straw-colored fluid was evaporated to dryness at room temperature, leaving a gummy residue of a yellowish brown color and aromatic odor, and some minute yellowish droplets. Inoculations with both these constituents on the writer and Dr. Senear, with the same technique, showed no differences from the blank controls at the end of 48 hours, and remained negative.

EXPERIMENT III.

Twenty flies were ground up in about 30 minims of the alcohol in which they had been preserved. The mixture was evaporated almost to dryness at 40° C., yielding a yellowish residue and the remains of the flies. Twenty minims of 96% alcohol added (Biological Station alcohol), allowed to stand, and then pipetted off, filtering through cotton in a capillary pipette. Product was a greenish yellow liquid, very slightly turbid. The inoculation was made by small double incisions on the forearm. About 12 hours after inoculation, the writer suddenly noticed a desire to scratch the site of inoculation. A papule about 3 mm. in diameter developed, the elevation easily seen when viewed slant-wise. This itched at intervals for some hours and then slowly subsided. The alcohol and blank controls remained negative. Similar inoculations on Dr. Senear were negative.

A new supply of flies arrived at this time, and experiments I and II were repeated with much better material and with the same result. Experiment III, which apparently showed that an alcoholic extract of the ground fly, if not of the whole one, contained the toxic agent, was felt to be open to suspicion, on the score that the extract was a suspension rather than a solution, on account of its slight turbidity. Experiment IV was accordingly performed, repeating experiment III, except that twenty flies were ground up in fresh alcohol and the alcohol then drawn off and refiltered through cotton, twice. It was then perfectly clear to the naked eye. A microscopic examination for residue was not made. Intradermal

injections were made with this extract, controlled by alcohol and distilled water, and negative results obtained. The reactions from alcohol and extract both resulted in small central necroses, but not the slightest sign of other reaction could be elicited.

From these experiments it was concluded that in all probability the toxic agent was either fixed in the fly's tissues by the initial preservation, or that it was not alcohol soluble in the first place. Later experiments showed that it was not inactivated, and the outcome of the intradermal injections seemed to confirm the opinion that faulty technique and not actual solubility gave rise to a positive result (attributable to small suspended particles of coagulated toxin) in Experiment III.

An effort to extract the toxic agent with water was then made, but unfortunately only Dr. Sencar was inoculated, and the negative outcome was invalidated later when it was found that he was relatively immune to the ground fly itself. It was then too late to repeat the experiment on account of the lack of material. The question of water solubility must therefore be left for later determination.

The negative outcome of efforts to secure an extract, with a rapidly vanishing stock of material, led the writer to seek a more direct means of determining whether the fly still contained an active toxic substance.

EXPERIMENT V.

Since the anatomy of the fly would lead one to expect the toxic agent to be at its maximum concentration in the anatomical structures concerned in its injection, the wings, legs and abdomens of twenty flies were removed and the heads and thoraces, thoroughly dried at room temperature, pulverized and made into a paste with one minim of glycerin, this being a menstruum easily disposed of by the scarified tissues. Crisscross scarification with a bistoury, covering an area 4 mm. square, and deep enough to give a slight exudate of blood-tinged lymph, was adopted, the writer's forearm being the site of inoculation. A glycerin and a blank control were made. The fly paste dried to a firm black crust. The following reactions were noted:

45 minutes. Site of inoculation showed an arcola extending 4 mm. beyond the papule. Controls, very slight erythema.

2 hours. Papule formation at site of fly inoculation. Controls negative.

3 hours. Definite infiltrated papule, 8 mm. across.

9 hours. Marked prickling and irritation for the past few hours. Marked red papule 15 mm. by 18 mm., fleshy feel. Elevation about 1.5 mm., itches slightly on friction. Controls entirely negative.

11 hours. Papule more elevated, some itching and burning. Controls negative.

22 hours. Inoculation-papule subsided but still palpable. No vesicle, no infection.

30 hours. Friction of papule and controls simultaneously with palm of hand, causes a sharp attack of pruritus, with elevation of the papule. Controls unaffected.

48 hours. Slight friction (accidental) while bathing, led to an attack of pruritus, and coincidently a papule developed beneath the crust, about 6 mm. in diameter, shotty and indurated. The papule remained after the itching subsided, and was identical in conformation with the late papule of the fly bite. No pseudovesicle formation or oozing was noted. Spontaneous attacks of itching occurred during the day.

54 hours. Papule excised, preserved in 5% formalin. Controls throughout entirely negative.

The pathological picture presented by the experimental lesion thus obtained, although somewhat distorted by the inoculation trauma, agrees in all essential features with that characteristic of the black fly bite. The crust contains fragments of the insect, including hard and soft parts, imbedded in a fibrinous exudate, with numerous pyknotic polynuclear leucocytes and detritus. Beneath the crust is a massive exudate of the same type, which is in places more or less completely walled off from the tissues below by collections of eosinophiles. The trauma to the epidermis has largely prevented the formation of the characteristic pseudovesicle, the distorted tissue of the papillary bodies being pushed up into the exudate where the overlying epidermis is cut through. At the borders, however, suggestions of papillary œdema are evident, together with the typical epidermal changes. The exudate of mast cells, small round cells and eosinophiles conforms in all essential cytological particulars with that characteristic of the mature lesion. The principal infiltration with round cells is perivascular, the eosinophiles are free in the tissues and have collected at the periphery of the infiltrates and in the upper layers of the corium, immediately below the crust. Collagenous fragmentation and œdema are on the whole less marked than in the actual bite, probably due to the

trauma to the epidermis, which permits of slight constant local exudation and drying.

Experimental inoculation after this positive result, has been confined to the ground fly itself, variously treated, and efforts to isolate or extract the toxic agent were abandoned. Inoculation of Dr. Sencar under the same conditions as those observed in producing the experimental lesion on the writer, gave at the end of 24 hours a small papule about 4 mm. in diameter, with a moderate areola and essentially negative controls. This reaction subsided permanently within the next twelve hours, and while positive, was interpreted as representing the reaction of a relatively immune individual.

EXPERIMENT VI.

In order to crudely estimate whether the fly tissues as a whole, or some special part, such as head and thorax, contained the toxic agent in non-diffusible form, the abdomens of 17 flies and the heads and thoraces of 10 were made into separate pastes and inoculations carried out as in the previous experiment. The bulk of material in the case of the abdomens was about $\frac{1}{3}$ that in the case of thoraces. The site of the head-and-thorax inoculation developed a typical experimental lesion. That of the inoculation with abdomens developed a small papule which lasted about 24 hours and then subsided, although traces persisted for some time. The typical lesion showed signs of oozing and crusting beyond the limits of the blackish scab. Since a larger part of the bulk of the heads and thoraces consisted of the hard chitinous parts of the flies rather than the soft organs, the conclusion would seem to be legitimate that the tissues of the fly do not produce a reaction as such (as in the case of the cantharides beetle) but that the toxic agent is concentrated in special structures lying largely in the anterior portion of the body.

EXPERIMENT VII.

A large and typical experimental lesion was produced on Professor Wile's arm by the usual technique. Ten ground flies heated to 100° C. were used on one of the inoculation sites, but the material was accidentally overheated, and the negative result was discarded. Professor Wile states that he has always been exceptionally susceptible to both the mosquito and the black fly. An areola, $1\frac{1}{2}$ to 2 inches in diameter, developed and a late papule,

nearly a centimetre in diameter, with intense periodic pruritus. A photograph of this lesion is shown in Fig. 4.

EXPERIMENT VIII.

Ten ground flies were treated with 0.25% hydrochloric acid for twelve hours at 37° C. The ground material assumed a reddish tinge almost at once. The filtrate was an orange yellow liquid. The ground material was well washed with 0.25% hydrochloric acid and inoculated in the usual manner, though without the use of glycerin, Professor Wile being the subject. The filtrate was evaporated to a concentration of 0.5% hydrochloric acid, and inoculated at the same time, with 0.5% hydrochloric acid and a blank as controls. All the inoculations were absolutely negative, the conclusion being that the toxic agent had been inactivated or destroyed by the acid. It is possible that neutralization of the acid would have restored the toxicity. Langer found the acid-treated bee poison to be toxic both before and after neutralization. In view of the above finding in a susceptible subject, no attempt to digest the toxic agent with pepsin = HCl was made.

EXPERIMENT IX.

This was undertaken to ascertain the following facts: (a) whether the blood serum of a relatively immune individual would form an inhibitory combination with the toxic agent; (b) whether immune serum would modify the reaction by decomposing the toxic substance in the incubator; (c) whether the blood serum of a sensitive individual would increase the toxicity of the agent; (d) whether a sensitive serum, by splitting up the toxin *in vitro*, would destroy its toxicity or inhibit the reaction.

It is also conceivable that the substance as it exists in the fly is not toxic as such, but only becomes so on being split up by lytic elements in the susceptible serum. In such an event, an unusually prompt reaction or one of special severity might be expected on inoculation with sensitive-serum treated flies.

The blood for these experiments was drawn from Professor Wile as a sensitive subject and from Dr. Sencar as a relatively immune subject. The bloods were kept at room temperature for two hours and then placed in the icebox for 24 hours. The following tubes were prepared:

- Tube I. 10 ground dried flies and 1 cc. serum UJW.
Tube II. $\frac{1}{2}$ cc. serum UJW.
Tube III. 10 ground dried flies and 1 cc. serum FES.
Tube IV. $\frac{1}{2}$ cc. serum FES.
Tube V. 10 ground flies in the alcohol preservative.

All these tubes were kept in the incubator ten hours at 37° C. Before inoculation the serum was pipetted from each batch of serum treated flies and kept. The flies themselves were washed with fresh serum of the kind with which they had been incubated. Following the usual technique with the exception of the use of glycerin with the ground flies, the following inoculations were made, Professor Wile and the writer being the subjects.

Right Arm.

- A. Flies treated with serum UJW.
- B. Serum UJW from treated flies.
- C. Normal serum UJW.
- D. Blank control.

Left Arm.

- F. Flies treated with serum FES.
- G. Serum FES from treated flies.
- H. Normal serum FES.
- K. Ground flies, dry.

In the case of Professor Wile's inoculations, the late results were unfortunately so ill-defined that it was necessary to discard them as inconclusive. Specially prominent wheals developed, however, around the sites of inoculation of UJW serum-treated flies (A) and UJW serum from treated flies. Subsequent reaction showed the dried flies to be active.

In the case of the writer's inoculations, only a very small amount of UJW serum-treated flies was used. This inoculation (A) and that of UJW serum from treated flies (B) showed wheals in the course of two hours, which, while actually less marked than the untreated fly control, were relatively more striking, considering the amount used in the inoculation. UJW serum-treated flies ran an interesting course, remarkably intense considering the small amount of the inoculated material. The lesion showed a very typical evolution. Periodic recurrent itching was marked up to the seventh day, when the crust came off, leaving a prominent elevated

scar, by far the most striking of the entire group. This lesion followed a more typical and active course than the dried fly control. The latter itched for two days but showed a relatively insignificant papule. The inoculation with "sensitive serum" (UJW) pipetted from serum treated flies, showed a papule for several days but the evolution was atypical.

"Immune-serum" treated flies (FES) produced a marked papule formation earlier than "sensitive-serum" treated flies. This papule was as persistent as that produced by the latter but markedly less pruritic and more atypical in its evolution. "Immune-serum" (FES) from serum-treated flies produced no effect, in which respect it differed decidedly from the sensitive serum.

The results from this rather complex experiment must be adjudged inconclusive when the margin of experimental error is considered. It was impossible to escape the impression, however, that the "sensitive serum" (UJW) had accentuated the virulence of the toxic agent in the flies with which it was incubated. The serum itself also seemed to have developed slight toxic properties, while the normal serum (UJW) was without effect. The "immune serum" (FES) produced no demonstrable change in the flies with which it was incubated, and was itself unchanged.

EXPERIMENT X.

To determine the effect of an alkaline solution and of enzymes acting in an alkaline medium upon the toxin, ground flies were treated with a 0.5% solution of sodium bicarbonate, and with a mixture of equal parts of this solution and fresh pancreatic juice. The latter was obtained by pressure from chopped cow's pancreas. Unfortunately the tube containing the pancreatic juice and ground flies was broken and the material lost. The flies treated with the alkaline solution showed no impairment of their activity and gave rise to a typical experimental lesion. This is of course in distinct contrast to the effect of hydrochloric acid. In connection with this experiment the relative effectiveness of flies that had been kept in alcohol since catching, and alcohol-preserved flies that had dried in the air for several weeks, was tested. An eleven year old boy was used as a subject. The fact that all the flies produced lesions made the results inconclusive. The impression gained was that the flies that had been kept in alcohol were more toxic than the dried ones. With the specimens kept in alcohol the writer succeeded in reproducing a fair picture of the pseudovesicular stage of the bite by re-

moving the crust on the third day, when the scarified epidermis had healed over.

EXPERIMENT XI.

To determine the effect of dry heat at 100° C. on the flies, 10 flies were sealed in a glass tube and kept under boiling water for two hours. They were then ground up with glycerin. Untreated ground flies and a blank were used as controls. The heated flies produced the typical reaction, unaffected apparently by this degree of heat.

EXPERIMENT XII.

The writer used the last of his flies in testing the effect of a hydrolytic ferment on the toxin. Pancreatin was employed, the activity of the preparation in a 0.25% solution of sodium bicarbonate being demonstrated by the use of boiled egg-albumin controls. These were completely dissolved in twenty-four hours at 37° C. A medium containing a 0.75% suspension of pancreatin in a 0.25% solution of sodium bicarbonate was used as the digesting agent for 10 flies, and allowed to act for 36 hours at 37° C. The bulk of material was reduced about two-thirds and the digesting agent colored a brownish yellow by the process. The digesting agent was pipetted off and preserved for inoculation and the residue washed with distilled water, which was also pipetted off and kept. The latter showed a slight opalescence, as if some material had precipitated. Untreated ground flies and a blank were used as controls. The results of this experiment were as follows. The solid residue from the pancreatin digestion produced no reaction. The digesting agent pipetted from the digested flies also produced no reaction. The aqueous washings of the digested flies, a slightly opalescent liquid, produced an indefinite reaction suggesting secondary infection rather than the usual typical fly lesion. The activity of the flies was evidenced by a typical reaction, with papule and areola, periodic pruritus, morning exacerbation, wheal formation on irritation and the usual train of phenomena covering a number of days. The "take" even presented pseudovesicle formation after removal of the crust on the fourth day. It was evident that the ferment had rendered the toxic agent inactive or had destroyed it entirely.

RÉSUMÉ AND DISCUSSION OF EXPERIMENTAL FINDINGS.

The principal positive result of the work above detailed has been the experimental reproduction of the lesion produced by the black

fly in characteristic histological detail by the use of preserved flies. The experimental lesions not only reproduced the pathological picture, but followed a clinical course, which in local symptomatology especially, tallied closely with that of the bite. This the writer interprets as satisfactory evidence that the lesion is not produced by any living infective agent. The experiments performed do not identify the nature of the toxic agent. Tentatively they seem to bring out, however, the following characteristics.

1. The products of alcoholic extraction of flies do not contain the toxic agent.

2. The toxic agent is not inactivated by alcohol.

3. The toxic agent is not destroyed by drying fixed flies.

4. The toxic agent is not affected by glycerin, but is, if anything, more active in pastes made from the ground fly and glycerin, than in the ground flies as such.

5. The toxic agent is rendered inactive or destroyed by hydrochloric acid in a concentration of 0.25%.

6. The toxic agent is most abundant in the region of the anatomical structures connected with the biting and salivary apparatus (head and thorax).

7. The toxic agent is not affected by a 0.5% solution of sodium bicarbonate.

8. The toxic agent is not affected by exposure to dry heat at 100° C. for two hours.

9. The toxic agent is destroyed or rendered inactive in alkaline solution by a typical hydrolytic ferment, pancreatin.

10. Incomplete experimental evidence suggests that the activity of the toxic agent may be heightened by a possible lytic action of the blood serum of a sensitive individual, and that the sensitive serum itself may contain the toxic agent in solution.

These results, so far as they go (omitting No. 10), accord with Langer's, except on the point of alcoholic solubility and the effect of acids. The actual nature of the toxic agent in the black fly is left a matter of speculation.

The following working theories have suggested themselves to the writer. First, the toxin may be, as Langer believes in the case of the bee, an alkaloidal base, toxic as such, and neutralized after injection by antibodies produced for the occasion by the body. In such a case the view that a partial local fixation of the toxin occurs, which prevents its immediate diffusion, is acceptable. Through chemotactic action, special cells capable of breaking up the toxin into harmless elements are attracted to the scene. Their function

may be, on the other hand, to neutralize directly, not by lysis. This would explain the rôle of the eosinophiles in the black fly lesion. If their activities be essential to the destruction or neutralization of the toxin, one would expect them to be most numerous where there was least reaction. This would be at the site of a bite in an immune individual. A point of special interest for further investigation, would be the study of such a lesion.

Second, it is conceivable that the injected saliva of the fly does not contain an agent toxic as such. It is possible that, like many foreign proteins, it only becomes toxic when broken down. The completeness and rapidity of this breaking down depends on the number of eosinophiles present. In such a case immunity should again be marked by intense eosinophilia.

Third, lytic agents in the blood serum may play the chief rôle in the liberation of the toxic agent from its non-toxic combination. An immune individual would then be one whose immunity was not the positive one of antibody formation, but the negative immunity of failure to metabolize. An immune lesion in such a case might be conceived as presenting no eosinophilia, since no toxin is liberated. If the liberation of the toxin is dependent upon lytic agents present in the serum rather than in any cellular elements, a rational explanation would be available for the apparent results (subject to confirmation) of the experiment with sensitive and immune sera. In this experiment it will be recalled that the sensitive serum seemed to bring out the toxicity of the ground flies, and the serum itself seemed even to contain some of the dissolved or liberated toxin. The slowness with which a lesion develops in the case of the black fly bite supports the view of the initial lack of toxicity of the injected material. The entire absence of early subjective symptoms, such as pain, burning, etc., is further evidence for this view. It would appear as if no reaction occurred until lysis of an originally non-toxic substance had begun. Regarding the toxin itself as the chemotactic agent which attracts eosinophiles, its liberation in the lytic process and diffusion through the blood stream attracts the cells in question to the point at which it is being liberated. Arriving upon the scene, these cells assist in its neutralization.

The view last presented is the one to which the author inclines as the one which most adequately explains the phenomena.

A fourth view is that the initial injection of a foreign protein by the fly (i.e., with the first bite) sensitizes the body to that protein. Its subsequent injection at any point in the skin gives rise to a local expression of systemic sensitization. Such local sensitization

reactions have been described by Arthus and Breton,¹⁸ by Hamburger and Pollack and by Cowie.¹⁹ The description of such a lesion given by the first named authors, in the rabbit, however, does not suggest, histopathologically at least, a strong resemblance to that of the black fly. Such an explanation of many insect urticariæ deserves further investigation, however, and may align them under cutaneous expressions of anaphylaxis to a foreign protein injected by the insect. Depending on the chemical nature of the protein injected, a specific chemotactic reaction like eosinophilia may or may not occur. Viewed in this light the development of immunity to insect bites assumes a place in the larger problem of anaphylaxis.

SUMMARY.

In order to bring the results of the foregoing studies together, the author appends the following résumé of the clinical data presented in the first paper.

The black fly, *Simulium venustum*, inflicts a painless bite, with ecchymosis and hemorrhage at the site of puncture. A papulovesicular lesion upon an urticarial base slowly develops, the full course of the lesion occupying several days to several weeks. Marked differences in individual reaction occur, but the typical course involves four stages. These are, in chronological order, the papular stage, the vesicular or pseudovesicular, the mature vesico-papular or weeping papular stage and the stage of involution terminating in a scar. The papule develops in from 3 to 24 hours. The early pseudovesicle develops in 24 to 48 hours. The mature vesico-papular lesion develops by the third to fifth day and may last from a few days to three weeks. Involution is marked by cessation of oozing, subsidence of the papule and scar-like changes at the site of the lesion. The symptoms accompanying this cycle consist of severe localized or diffused pruritus, with some heat and burning in the earlier stages if the œdema is marked. The pruritus appears with the pseudovesicular stage and exhibits extraordinary persistence and a marked tendency to periodic spontaneous exacerbation. The flies tend to group their bites and confluence of the developing lesions in such cases may result in extensive œdema with the formation of oozing and crusted plaques. A special tendency on the part of the flies to attack the skin about the cheeks, eyes and the neck along the hair line and behind the ears, is noted. In these sites inflammation and œdema may be extreme.

A distinctive satellite adenopathy of the cervical glands develops

in the majority of susceptible persons within 48 hours after being bitten in the typical sites. This adenopathy is marked, discrete and painful, the glands often exquisitely tender on pressure. It subsides without suppuration.

Immunity may be developed to all except the earliest manifestations, by repeated exposures. Such an immunity in natives of an infested locality is usually highly developed. There are also apparently seasonal variations in the virulence of the fly and variations in the reaction of the same individual to different bites.

Constitutional effects were not observed but have been reported.

The summary of histopathological findings is given on page 831.

The summary of the experimental findings is given on page 852.

The writer desires to tender his special thanks to Professor Wile for his invaluable criticism, advice and encouragement in the carrying out of this study, and for the Departmental facilities placed at the writer's disposal.

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PLATE XI.—To Illustrate Article on A Clinical, Pathological and Experimental
Study of the Lesions Produced by the Bite of the "Black Fly,"
by JOHN H. STOKES, M.D.



Fig. 1.

Fifth-day mature lesion (D 74). Low-power drawing showing papillary edema and infiltrate in the region of the punctum, Van Gieson stain. The central infiltrate near the point marked *A* is shown in Fig. 3 as it appears in an adjacent section (D 77) under high power.

PLATE XLI.—To Illustrate Article on A Clinical, Pathological and Experimental
Study of the Lesions Produced by the Bite of the "Black Fly,"
by JOHN H. STOKES, M.D.

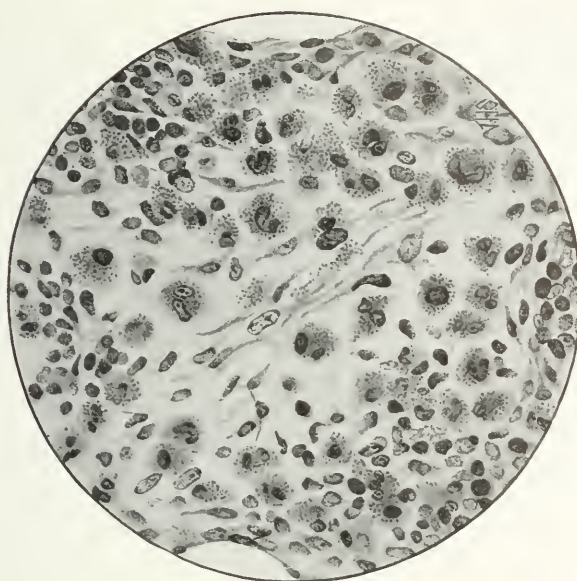


Fig. 3.

Fifth-day mature lesion (D 77), showing eosinophiles in the central infiltrate near the point marked A in Fig. 1. Leitz $\frac{1}{12}$ oil immersion objective, ocular 4. Polychrome methylene blue (Unna) and eosin.

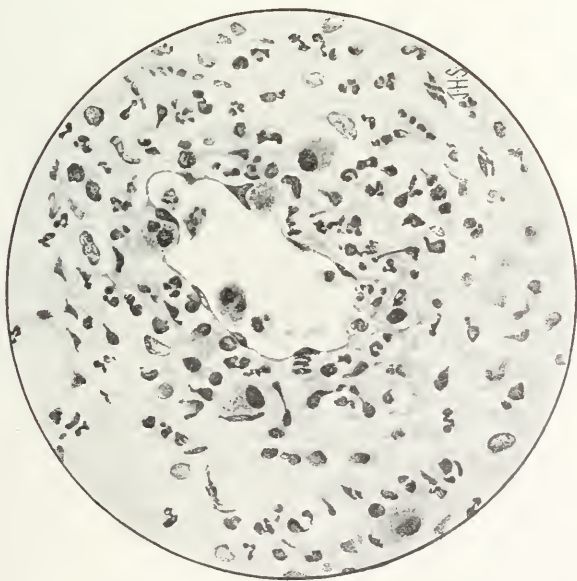


Fig. 2.

Four-hour lesion (A 40), showing early perivascular infiltrate and diapedesis of eosinophiles through the walls of a capillary near the punctum. Leitz $\frac{1}{12}$ oil immersion objective, ocular 4. Haematoxylin-eosin.

PLATE XLII.—To Illustrate Article on A Clinical, Pathological and Experimental Study of the Lesions Produced by the Bite of the "Black Fly,"
by JOHN H. STOKES, M.D.



Experimental lesion produced from alcohol-fixed flies, dried and ground into a paste with glycerin.

CORRESPONDENCE.

THE UNITED STATES OF COLOMBIA A FERTILE FIELD OF
RESEARCH FOR THE DERMATOLOGIST.

SANTA MARTA, U. S. Colombia, Sept. 22, 1914.

To the Editor:

Readers of *THE JOURNAL* whose work entails the examination and treatment of patients from various parts of the world, especially from tropical America, may be interested in the following brief description of the cutaneous conditions which I encountered during the course of a short sojourn in Colombia, South America.

The United States of Colombia has long been known as a veritable Pandora's box of cutaneous maladies. Unfortunately—as is the case with Pandora's box—Hope seems to be pretty securely locked up and out of the way here, for such a thing as consistent and intelligent treatment of skin diseases in this country would probably be regarded with suspicion by the officials! The majority of Colombian physicians are said to be highly educated in medicine, but why they do not utilize their skill and knowledge to lessen the burdens of the halt, the lame and the blind is a mystery.

Aside from the common tropical diseases of the skin, such as leprosy, elephantiasis, yaws, gangosa, caraate or pinta, sand-fly eruptions, etc., certain conditions are said to have the proud distinction of occurring almost exclusively in the hills and vales of this country. Piedra, for example, a disease affecting the scalp and hair of the native Indians, is apparently limited to the State of Cauca. Dr. Charters, formerly an interne at the New York Skin and Cancer Hospital, whom I had the good fortune to meet in this city, tells me that many Indians come to his clinic from the mountains in the interior, who are afflicted with piedra. They pay no attention to the disorder, however, as it apparently gives rise to no subjective symptoms whatever. Dr. Charters also encounters cases of ulcerating granuloma of the pudendi; many natives here exhibit eruptions of grouped warts of the common variety, probably a contagious affection. Dr. Charters informs me that he meets with a variety of cutaneous diseases which he is unable to identify at present; he has been stationed here only a short while and is getting his laboratory into working order and hopes to do some research work in the near future.

At the city of Cartagena, the first barefoot dock laborer to limp up the gang-plank exhibited a classical example of advanced elephantiasis of the verrucous and fissured type; he was a black. Soon after, another negro came up, presenting a complete destruction of the columella of the nose and the soft palate. I took this to be a case of gangosa (rhinopharyngitis mutilans), although I had never seen a case before. The condition resembled both syphilis and lupus.

Unfortunately, I omitted to bring with me any literature dealing with tropical diseases. I had access, however, to a concise, recently published hand-book of dermatology, which, though it deals very briefly with tropical diseases, at least served to refresh my memory in the right direction and to draw my attention to certain tropical disorders of the skin with which I had had no previous acquaintance.

At the city hospital in Cartagena I saw four cases of what I believe to be Madura foot (mycetoma pedis), two of gangosa, one of disseminated yaws, three cases of elephantiasis of the legs, besides numerous ordinary leg ulcers and syphilitic patients with the usual lesions.

The Madura foot cases (if such they were) occurred in middle-aged Colom-

bian men. The general appearance of the lesions coincided with the descriptions and illustrations of the affection of which I had often read and seen in the text-books. There is little doubt in my mind that these cases represented some variety of mycetoma. One may well ask why I did not examine a little of the discharge from the nodules and sinuses on the feet and legs of these patients; sad to relate, the hospital was unencumbered with a microscope or any other form of laboratory equipment.

The cases of gangosa presented the usual appearance described by the writers on the subject. The tissues affected were the upper lip, the middle of the upper jaw, the hard and soft structures of the lower portion of the nose, the roof of the mouth, the uvula and soft palate. In one of the patients the pharynx could be seen through the nares. He told me that he had received two infusions of salvarsan without benefit.

The case of yaws (called bouba by the patient herself) occurred in a young native girl. It was of the disseminated, nodular and frambæsiiform type, and resembled a disseminated bromide eruption more than anything else. The mucous membranes were free. She was getting well under potassium iodide medication.

Much to my regret, I was unable to meet Dr. Obregon, of Cartagena, who kindly offered to conduct me through the hospital, so that I had to rely upon myself and the sisters of charity, who spoke only in Spanish, for any information regarding the patients and their maladies. There is no resident physician in charge of the hospital.

Leprosy is common enough in this part of the world. A large leprosarium is maintained by the Colombian Government on an island in the beautiful harbor of Cartagena, to which haven all recognized victims of the disease are sent. I am told that very little in the way of therapy is carried out here, but that is merely hearsay.

In Santa Marta, a great banana port and the first city in South America settled by whites (Cartagena being the second), the most common skin disease is caraate, or pinta. One has not long to seek to observe examples of caraate, *ad nauseam*. Of a group of twenty banana carriers whom I examined cursorily on the dock, seventeen displayed the lesions of caraate on the hands, feet, neck and a few on the face. Had I stripped the remaining three, I have no doubt that they also would have shown evidences of the disease. These banana carriers presented various shades of color, from light-brown to black. Among them were native Indians, Colombian descendants of the Spaniards, Jamaican negroes, and the products of interbreeding of Indian, Negro and Caucasian. Their ages varied from sixteen to sixty or more. All appeared to be healthy; in fact, they had to be healthy to endure the hard work of loading bananas in the great heat of the day.

The dermatoses which are designated and pointed out to me as caraate or pinta by the native physicians are quite dissimilar in clinical appearances, and I am constrained to express some doubts as to the propriety or fitness of including divergent types of these epidermophytic affections under the common name of caraate, without the use of qualifying adjectives. I observed three separate and distinct types of the affection which, without being able to resort to a Manson, a Castellani, a Sabouraud or other authority, I would be inclined to designate as follows:

1. The leucodermic or vitiligid type.
2. The polychrome type.
3. The pityriasic type.

The first, or leucodermic type, is by far the most common. If a small area of the affected skin, say the size of a silver dollar, be examined, while the rest of the diseased portions are ignored for the time, the diagnosis of leucoderma, pure and simple, would be made without hesitation. But, taking the eruption

as a whole, it differs considerably from ordinary leucoderma in that the blanched or depigmented areas contain numerous scattered islands of normally pigmented skin, giving the part the piebald and mottled appearance characteristic of the eruption. There are no extensive, sharply margined areas with convex or circular borders, well-defined, as occur in true leucoderma. The affection attacks whites as well as blacks, but to a much smaller extent. The hands, feet, neck and face are most frequently involved, but the disease may implicate any part of the body. The palms and soles are involved in all long-standing cases. Scaling is very meager, but I managed to obtain some scales from a case recently attacked, and hope to find the fungus—an aspergillus—which causes the trouble. To all appearances this fungus attacks the corium, causing the disappearance of the pigment and resulting in a true leucoderma.

Of the second, or what may be called the polychrome type, I saw only two examples, both in light-brown natives of Spanish descent. The condition was present on the backs of the hands and forearms and on the dorsal aspects of the feet. The lesions impressed one as a peculiar multi-colored, irishlike tinting of the skin; there were coalescent areas of pink, blue, yellow and brown, one tint merging indistinctly with the other. It reminded me of nothing so much as an artist's palette, on which the tints had undergone more or less "scrambling." These patients perspired profusely, and I was unable to obtain scales from their skin. Scrubbing with hot water and soap caused no visible change in the appearance of the affected areas.

The third, or pityriasis type, was observed chiefly in children and youths who performed no active work and therefore perspired comparatively little. The lesions are, to my unpractised eye, indistinguishable from those of ordinary pityriasis versicolor as we see them in the dark-skinned races. They consist of large and small, round and oval, sharply margined, light-colored, slightly furfuraceous plaques, occurring mostly on the extremities and the sides of the neck. They occasion considerable pruritus. I was unable to cajole any of the children into permitting me to take a scraping from their skin.

These three types of eruption are so different in appearance, clinically, that one cannot doubt that they are the result of the growth of several different varieties of fungi on the skin.

The one circumstance which struck me as very interesting in connection with caraate is this: practically every bunch of bananas coming out of tropical America is handled by at least a half-dozen different laborers presumably afflicted with the dermatosis, from the time it leaves the plantation until it is placed in the hold of the ship; and yet, so far as I am aware, the condition is practically unknown in the United States and Europe, to which large consignments of these bananas are frequently shipped.

About a year ago a woman, a native of Mexico, appeared at the Vanderbilt Clinic with lesions on the forearms which were described at the time as a "bizarre form of mottled leucoderma." She was presented with the diagnosis of leucoderma before one of the dermatological societies. In the light of my newly acquired knowledge, I now feel certain that this case of leucoderma was, in fact, an example of caraate, acquired in Mexico, and I hope to get the opportunity to obtain and examine a scraping from this patient's skin in the near future.

In conclusion, I take this opportunity to extend my sincere thanks to Drs. Colbert and Charters, the two hard-working gentlemen in charge of the excellently appointed modern hospital maintained by the United Fruit Company in this city. Among other things, their courtesy and hospitality caused me to ignore and even forget the intense heat which holds this region in its grasp from sunrise to sunset.

FRED WISE.

SOCIETY TRANSACTIONS.

NEW YORK ACADEMY OF MEDICINE,
SECTION ON DERMATOLOGY.

Regular Meeting, April 7, 1914.

WILLIAM B. TRIMBLE, M.D., *Chairman*.

URTICARIA HÆMORRHAGICA. Presented by DR. LAPOWSKI.

The patient was a girl, 7 years old. The first attack occurred three months ago, leaving hæmorrhagic, brownish, round patches, which did not itch. A new attack of two days' duration showed patches of erythema urticatum with dermographism. On the hard palate was an erythematous patch, with whitish abrasions. After a few days, the erythema subsided, leaving brownish patches, which did not disappear under pressure. The patient's general condition was normal and there was no history of any infection for the past two years.

LUPUS VULGARIS ANNULARIS. Presented by DR. PAROUNAGIAN.

The patient was a boy, 3½ years old, born in the United States. The duration of the condition on the face, appearing as a papule and gradually increasing in size, was two years. The lesion was situated on the left side of the face, near the border of the inferior maxillary bone, the size being about half an inch by three-quarters of an inch in diameter, shape oval, borders elevated, color purplish red, and the centre consisting of a depressed scar.

About a year and a half ago the patient had an infected gland in the neck which was lanced and healed, leaving a scar. Two weeks ago two more distinct swellings appeared in the neck which were red, painful and showed signs of suppuration. The family history was negative, the patient was well nourished and had no cough.

TUBERCULIDE (ACNITIS). Presented by DRs. MacKEE AND WISE.

The patient was a youth of 19, from Dr. Fordyce's clinic. The duration was 8 months. The eruption consisted of a large number of lesions, some of which were deep-seated papules, while others were ulcerated. They ranged from a pin-head to a lentil in size and, after healing, left small, depressed scars. The lesions were scattered over the forehead, cheeks, chin and nose. All other parts of the body were free. Evolution and involution were very slow. The color ranged from a livid red to a deep purple. The von Pirquet test was negative.

DISCUSSION.

DR. POLLITZER said that he preferred the title papular necrotic tuberculide for this disease which he had himself described in 1891 under the name of hydradenitis suppurativa. This case presented a few of the typical lesions deep in the corium where they could be felt rather than seen.

DR. GOLDENBERG said that some of the lesions on the nose were lupus vulgaris.

GUMMATA OF THE FACE. Presented by DR. LAPOWSKI.

The patient, Mr. S., was seen first in 1905 with a serpiginous nodular syphilis on the face, body and scalp. The present scars were the remnants of former lesions. He came on January, 1914, with a nodulo-gummatous syphilide in single

lesions and in half rings on the neck, wrists, face and trunk. The Wassermann reaction was four plus. After one injection of 0.03 calomel, the lesions disappeared in one month, leaving the scars.

FIBROMA MOLLUSCUM. Presented by Dr. BAUGHMAN.

The patient, from Dr. Trimble's Clinic, was 40 years of age, unmarried, with no family history of similar conditions. The tumors first appeared on the right foot when the patient was about five years old, and since then had gradually increased in number and size until they had become widely distributed. No treatment has been given up to the present year, except for the surgical removal of several large tumors from the face.

ANNULAR SYPHILIDE. Presented by Dr. BAUGHMAN.

The patient, from Dr. Trimble's Clinic, was 24 years of age, unmarried, and a waiter. There was a history of chancre on the glans penis about four months previous to the appearance of the eruption. The manifestations consisted of slightly elevated and broken rings, the size of a ten-cent piece and smaller, confined to the cheeks, the upper lip and the naso-labial junction, and the chin. The duration had been four to five weeks. The skin lesions had been accompanied by enlarged red tonsils with mucous patches, and enlarged glands.

SYPHILIS. Presented by Dr. HEIMANN.

The patient was a blacksmith, 24 years old, and gave a vague history of chancres one and four years ago. The former were multiple and were probably nothing but large papules. The lesions the patient presented were of the late secondary, mixed with the early tertiary period. Over his entire torso and extremities as well as on his chin and neck were scars of various sizes, denoting a slight necrotic process. Some of these scars had a deeply pigmented margin. On those portions of his face where seborrhoeal eruptions were most common, were to be found circinate groups of scaling, greasy nodulo-papular syphilides. At the angle of his mouth on the right side was a rhagade, communicating with a mucous patch. On the extensor surface of his right forearm was a large disc of nodulo-papular lesions, distinctly of the tertiary type. On the palmar surface of the left hand, at the root of the index finger, was a fungating gumma apparently arising from the phalanx, of which the periosteum was inflamed and thickened. There were general glandular enlargements.

SYPHILIS CONGENITA. Presented by Dr. HEIMANN.

The patient, Lily S., 12 years old, ninth child, delicate since babyhood, presented the following characteristics: small, delicately built child, pale and anæmic looking; pupils reacted sluggishly to light, but promptly to accommodation; slight arcus senilis; hearing seemed fair, ticking of a watch audible from one foot from left ear, two feet from right. Teeth poor and suggested the Hutchinsonian type. Bony system: slight saddle nose, high-vaulted hard palate, tibiae tremendously thickened and sabre-shaped, with a gummatous periostitis on the left side; thorax barrel-shaped. Musculature weak; contracture of left upper extremity with the elbow in a position of semi-flexion. Central nervous system: deep tendon reflexes exaggerated, no ataxia or Rhomberg. Abdominal viscera; liver extended from fifth rib to umbilicus, spleen from sixth rib to umbilicus in mid-axillary line. Inguinal glands enlarged, Wassermann four plus. No lesions were visible on the skin.

The history of the mother was as follows: Widow, 39 years old, fifteen

pregnancies. First child was a son, 23 years old, alive and well. Second child a daughter, 21 years old, alive and well. Third child a son, 19 years old, alive and well. Five still births. Ninth child a daughter, 12 years old, present patient. Tenth child, still birth. Eleventh child a daughter, nine years old, alive and well. Two still births. Fourteenth child a son, four years old, alive and well. Fifteenth child, still birth. The 21-year-old daughter was perfectly healthy in appearance and had three healthy children.

FURROWED OR SCROTAL TONGUE. Presented by DR. BECHET.

This case, a male adult, aged 29, had had the condition on his tongue for fourteen years. The tongue was covered with a network of linear depressions and corresponding elevations. The furrows were irregularly longitudinal, transverse, curved and forked.

PSORIASIS SIMULATING SYPHILIS. Presented by DR. BECHET.

Mrs. M. L., aged 29, first noticed the eruption two years ago. When she presented herself for examination, in Dr. Kingsbury's service at the New York Skin and Cancer Hospital, she had on the arms and thighs a number of grouped, crusted lesions; the crusts were darkish yellow, greatly raised, forming several layers, much like that of an oyster shell, and when forcibly removed left a bleeding depressed surface. The scalp also showed similar lesions with a tendency to serpiginous arrangement. The elbows and knees were free. A few small punctate psoriatic spots appeared on the trunk. The Wassermann reaction was negative.

LICHEN PLANUS. Presented by DR. LAPOWSKI.

The patient, Mr. L., aged 21, had been suffering from the attack one year; the localization was as follows: ears; left zygomatic region; right forearm, pea-sized scar, remnant of shiny papule; neck, a serpiginous line of pin-head, whitish points, raised above the skin.

PRE-MYCOTIC STAGE OF MYCOSIS FUNGOIDES. Presented by DR. LAPOWSKI.

The patient, Mrs. K., aged 68, gave neither a personal nor family history of any skin disease. The lesions were scattered over the upper and lower extremities, especially the thighs, trunk and buttocks. The mucous membranes were free. No glands. There was intense pruritus. The first appearance of the eruption occurred fourteen years ago, lasting six months. Two years ago itching began, accompanied by red blotches all over the body; since then there was a recurrence every spring, gradually disappearing, the lesions becoming dark-bluish in color. With each attack the lesions become bright red. They never disappeared entirely.

VON RECKLINGHAUSEN'S DISEASE. Presented by DR. D. O. ROBINSON.

M. J., female, aged 36; married; three children, of whom two were living. Three sisters and two brothers; father died of cardiac disease and mother died of diabetes at the age of sixty-six. Patient's mental condition, normal. No history of any skin affection in the family. This disease first appeared at nine years of age, as a small growth just below the right ear, and a few months later a number of new ones were observed. At the time of presentation the lesions were irregularly distributed in considerable number over the body and

varied in size from that of a pea to that of a walnut. The objective characters corresponded with those usually observed in von Recklinghausen's disease—the frequent bluish color, soft feel, deep seat, and the presence of many pigmented spots on the general surface. A microscopical examination of a small lesion was made, and the diagnosis confirmed.

CIRCINATE SYPHILIDE. Presented by Dr. WILLIAMS.

M. K., female, white, married, 22 years old. Miscarriage at four months, about seven months ago. The patient was four and a half months pregnant. About two months ago she noticed a spot like a "cold sore" at the right naso-labial fold. A week later a similar spot appeared in the left naso-labial fold, and then patches appeared on the lower part of the face. She noticed a mass on the inner surface of the left thigh near the vulva for the past month; it was eroded and elevated a quarter of an inch above the surface, about half by one and a half inches. Nothing on the right thigh, opposite. On the lower part of the face were many circinate lesions, and some circular lesions with crusts. There were fissures at both angles of the mouth and a mucous patch on the left tonsil.

SYPHILIS AND PSORIASIS. Presented by Dr. WILLIAMS.

G. P. S., male, 51 years old, married at 26 years of age. The patient said he had had a recurrent eruption of red patches with dry scales since boyhood. On March 16th there was a profuse eruption of broad, flat, brown papules on the face and trunk; there were elevated, eroded papules on the inner surfaces of the thighs near the crotch, and the throat was congested. Scattered over the back and the extensor surfaces of the extremities were a number of circular or oval red patches, which yielded silvery scales on scratching, and some patches covered with silvery scales.

March 18th.....Wassermann, 4 plus.

March 18th.....mercury salicylate, 1 gr. in buttock.

March 27th.....mercury salicylate, 1 gr. in buttock.

April 3d.....mercury salicylate, 1 gr. in buttock.

Eruption of brown flat papules nearly gone; condylomata improved; mucous patches developed on tonsils, which were greatly enlarged; the psoriatic lesions persisted despite the antisypilitic treatment.

LUPUS VULGARIS TREATED BY THE KROMAYER LIGHT. Presented by Dr. CLARK.

The patient, a German, 24 years of age, gave the following history: The lesion first appeared about two years ago as a little "pimple" on the right cheek. This had gradually spread until, when first seen, six weeks ago, it was about the size of a half dollar with thickly studded, typical, apple-jellylike tubercles and with some crusting. At that time, six weeks ago, the patient was given one massive application of fifty-odd minutes with firm pressure and No. 2 filter. A considerable reaction followed this application with crusting, which at the end of three weeks loosened up and left a healed condition of the lesion beneath it, with the possible exception of one small nodule in the centre. This active lupus lesion had been apparently healed with one massive application of the Kromayer light, leaving a pitted scarring at the site of the lesion and temporary pigmentation of the normal surrounding skin included in the exposure, but with no scarring of this normal skin.

LUPUS ERYTHEMATOSUS TREATED BY THE KROMAYER LIGHT.
Presented by DR. CLARK.

The patient, a German female, 35 years of age, gave the following history: Nine years ago the lesion began on the left side of the nose as an itchy, scaly patch. The patient had had various kinds of treatment, including very prolonged tests with iodine, quinine, iodoform and lotio alba. When first seen, one year ago, the patient had a beefy, thick, inflammatory lupus erythematosus across the nose, and extending, bat-winged shape, half to three-quarters of an inch on each cheek. The patient was chosen because it was one of those thick, crusted, inflammatory lupus conditions which was ordinarily so hard to improve. During the past year the patient had had, at intervals, applications with the Kromayer light, using firm pressure and blue filter, Numbers 2 to 4. The applications varied in length from thirty to forty-five minutes. Because of the contour of the nose, only small areas could be treated by the pressure method at a sitting, and in this variety of lupus it seemed necessary to expose each area two, three or even four times; therefore, during the past year the patient had had about thirty exposures. With the exception of a small patch along one edge of the healed lesion, the nose was apparently healed with, of course, a distinct atrophic scar as one always expected in this deep-seated variety of lupus.

DISCUSSION.

DR. HEIMANN said that Kromayer claimed to get results in lupus vulgaris with his lamp equal to those of Finsen, but that other European observers were not able to do so. In Copenhagen, at the present time, the Kromayer lamp was being abandoned for carbon-dioxide snow in the treatment of lupus erythematosus.

DR. McMURTRY said that he had only the best results from the use of carbon-dioxide snow in the treatment of lupus erythematosus when it was applied with firm pressure from thirty-five to forty seconds and then withdrawn; the part was then allowed to thaw out thoroughly, and the snow was re-applied for the same length of time. The edge of the block of snow should be rounded so as to avoid extra heavy pressure at the margins. If this were done there was usually no pigmentation at the border of the scar.

DR. CLARK, closing the discussion, said that the cosmetic results of this treatment were excellent. What scarring existed was limited to the diseased area, and did not affect the surrounding skin, as was the case when carbon-dioxide snow was used. Case 18 was a typical example of lupus vulgaris with apple-jelly nodules. In treating these cases, very firm pressure must be used in order to press out the blood as much as possible. This case had had one treatment. The case of lupus erythematosus had had several treatments and was healed except for a small area along the edge of the old lesion which had again been treated.

CASE FOR DIAGNOSIS. Presented by DR. BECHET.

The patient stated that the lesion first appeared two and a half years ago, and seemed to originate from a small "pimple" which had been present for some time. The lesion grew steadily in size, gradually assuming the appearance presented. When first seen there was a large, lobulated, bluish-red mass, about three inches in diameter, situated on the buttock, greatly raised, with a deep, boardlike infiltration extending over an inch beyond the visibly diseased area. A Wassermann reaction showed a one plus. Four months of active specific treatment gave negative results, the lesion showing no change. A biopsy did not furnish a definite clue to the diagnosis—one pathologist thought it a sarcoma, another a granuloma of some kind.

DISCUSSION.

DR. POLLITZER said that the duration of the disease, two and a half years, without softening, was against the diagnosis of gumma. He did not think that the administration of mixed treatment by the month for a month could be called a very active treatment, and its ineffectiveness in this case was of no help in the diagnosis. However, he thought the case was not syphilis. The mass was a tumor of some kind, and from its peculiar hardness probably a connective tissue growth. The specimen shown suggested a spindle-celled sarcoma (though it was impossible to make a histological diagnosis from the single section exhibited), but the long history and also the clinical appearance were somewhat against this diagnosis. The diagnosis rested between spindle-celled sarcoma and keloid.

DR. HEIMANN said that he saw no pus in this case. It was certainly a new growth and either keloid or sarcoma, but in view of its indolent character and long duration it was probably keloid.

LUPUS ERYTHEMATOSUS. Presented by DR. PAROUNAGIAN.

The patient was a male, 36 years old, born in the United States, driver by occupation. The duration of his trouble was three months. No venereal history. Most of the lesions were situated on the upper portion of the chest, some scattered lesions on the thigh, legs and hands. They were extremely itchy and pigmented, some showing atrophic white centres, some having a thickened appearance; the lesions varied in size from that of a dime to that of a silver quarter.

DR. GOLDENBURG said that he thought this was a case of syphilis.

DR. CLARK said that this patient showed syphilitic scars on the leg and syphilitic lesions on the body.

DR. PAROUNAGIAN, in closing the discussion, said that he excluded syphilis by the extreme pruritus of the lesions and the rough scaling of some plaques, and the absence of any history of infection. The crusted lesion on the leg was probably a pus infection. Dr. Parounagian added that since the presentation of the case, the Wassermann examination showed a negative result.

PAPULO-PUSTULAR SYPHILIDE. Presented by DR. LAPOWSKI.

The patient was a man, 22 years of age. The eruption had been present for several months and was scattered over the trunk, neck and extremities. It consisted of small papules and pustules, some of which simulated the eruption of chicken-pox. The Wassermann reaction was four plus.

ALOPECIA NEUROTICA. Presented by DR. HEIMANN.

The patient, a stock clerk, was 21 years old. Eight years ago he was frightened by a large dog. A year later he completely lost the hair of his axillæ, chest, scalp, eyelashes and eyebrows. His pubic hair did not come out. In the course of time a new growth of hair appeared on the scalp. Eighteen months ago the patient sustained a severe and extensive third degree burn, involving the entire right arm and upper portion of the forearm. Fourteen months later, or four months ago, the hair on his scalp began to fall, and continued to do so since. This case was presented as a probable member of that rare group in which the loss of hair gradually followed a severe nervous shock. Severe headaches and psychic disturbances were lacking in this patient.

DISCUSSION.

DR. POLLITZER said that it was hard to believe that the alopecia in this case was due to a shock which had occurred so long a time before. On physiological

grounds, three months must be considered as the utmost limit of time for a nerve lesion to produce falling of the hair.

CASE OF DEAFNESS FOLLOWING THE USE OF SALVARSAN. Presented by DR. TRIMBLE.

Dr. Trimble reported a case of grouped miliary syphilide seen in January, with a positive Wassermann reaction. The patient was given mercury by mouth and later one intravenous injection of salvarsan. Six weeks later deafness developed, and increased. The patient was referred to the ear department of the dispensary, where nothing was found in the naso-pharynx to account for the deafness. Since the single dose of salvarsan no antisyphilitic treatment had been given. Dr. Trimble asked the opinion of the Section as to the proper management of such cases.

DISCUSSION.

Dr. GOLDENBERG said that he had treated a patient who had acquired a chancre in August, 1911. Three weeks afterward he was given one intravenous injection of salvarsan in San Francisco; five weeks later he became deaf in his right ear, a week afterward he became dizzy, being forced to lie down flat, then followed right facial palsy with headache and numbness on the right side. He was kept in the hospital at San Francisco for three months, during which time he received no specific treatment except potassium iodide at intervals. When he was admitted to Dr. Goldenberg's service at Mount Sinai Hospital, in March, 1912, he showed right facial palsy, specific optic neuritis and involvement of the right acoustic nerve, viz.: absence of vestibular function (tuning-fork and Barany tests made by Dr. Whiting). Blood Wassermann test was plus; lumbar puncture, clear fluid, under increased pressure, 20 leucocytes per ccm.; 0.2 ccm. give negative Wassermann, 1 cc. weak inhibition (examined after three salvarsan injections). Under vigorous treatment by thirteen injections of salvarsan the hearing was practically restored and the patient enjoyed good health.

Dr. POLLITZER said that the deafness in this case was most probably due to a Herxheimer reaction within the canal of the vestibular nerve, and that the proper treatment was to give more antisyphilitic treatment. If neglected, these cases would go on to total deafness. He had had several such cases of deafness as well as of optic neuritis following an injection of salvarsan in the first months of the infection, and they had all been cured by further injections of the same drug. The physician who failed to treat these cases of early involvement of the cranial nerves by the most energetic antisyphilitic measures assumed a grave responsibility.

MANHATTAN DERMATOLOGICAL SOCIETY.

Regular Meeting, April, 1914.

DR. SATENSTEIN, *Chairman*.

LUPUS ERYTHEMATOSUS. Presented by Dr. GOTTHEIL.

The patient, Miss L., was a female adult who had been under treatment for a great many years. She was first treated with trichloroacetic acid and had been treated five years before her presentation with solid carbon dioxide. The interesting feature of the case was that the condition was extremely obstinate at the time of treatment five years ago. She came back to the speaker because of a new patch of lupus erythematosus at the left supra-orbital ridge.

DISCUSSION.

DR. OCHS said that if he remembered correctly, the solid carbon dioxide snow had only been in use in cases like this for a few years. It was first brought to the attention of the profession by Pusey in 1907. He agreed with Dr. Gottheil that the lesion on the upper eyelid was lupus erythematosus and should be treated with the solid carbon dioxide.

DR. GOTTHEIL said this patient had been treated for a long time with trichloroacetic acid with very partial results, but as soon as the solid carbon dioxide in such cases was demonstrated, he started to use it and cured the patient with it. It was not a superficial lesion. The scar tissue looked very white in the daytime. It was just possible that the lesion presented on the eyelid could be excised.

DR. PISKO said he wanted to say a few words regarding the new lesion. It seemed to him that this was small enough for trichloroacetic acid treatment, and he thought this lesion an ideal case for it. The point was that it would be much better than the surgical treatment. He said that if a knife were used there would be a cross scar from the incision which would become quite elevated, while, on the other hand, on such a small area, with the acid one should get a white, pliable scar.

PROGRESSING ERYTHEMA WITH ŒDEMA OF THE GENITALS AND PORTIONS OF THE LOWER EXTREMITIES. Presented by Dr. Pisko.

The patient was a female child, two weeks old. She was born perfectly healthy and normal. On the Monday morning previous to her presentation the mother noticed a diffuse redness around the umbilicus, but not extending any further down than to the vulva. During Monday night the mother said the vulva began to swell and the redness increased. When Dr. Pisko saw the patient, Tuesday, the redness was very marked and went up about two inches above the umbilicus, and as far down as the knee. When he saw the baby on Thursday the redness was much more marked than it was at the time of presentation, and had gone down a little further on the knees. He noticed that night that the redness of the left side was down to the lower half of the leg and on the right side; even the foot was affected. He treated the case with applications of magnesium, zinc and ten per cent. ichthyol, which benefited, as it seemed, the œdematous swelling and also the redness. At first he thought it might be due to some sepsis. The child was always crying. There was no other affection and the speaker could see nothing that he could attribute the sepsis to. He presented it as a case of erythema which was progressing. There was no temperature and no vesiculation. The mother said that the child nursed well.

DISCUSSION.

DR. GOTTHEIL said he could not see why this affection might not be termed erysipelas. He thought that the margins of the lesions would be against erythema.

DR. WISE suggested the diagnosis of beginning scleroderma, with its prodromal inflammation.

DR. KINCH said in this case the tissues below the skin were involved as well as the skin itself. His diagnosis would tend toward erysipelas or something more than ordinary erythema.

DR. McMURTRY said he read an article which spoke about this form of lesion appearing with infiltration and which was described in young children just like this child. It seemed to him that the description might fit the case very well and, as was suggested, erythema with infiltration precedes scleroderma.

DR. PISKO said that on that Monday night the condition had started. When

he saw the patient Tuesday, the temperature was 98.8° F. There was diffuse redness about three or four inches above the umbilicus, and when he saw it on Thursday, that was the day previous to presentation, it was the same as it was on the night the case was shown. The erythema had wandered down on the left side to the lower third of the leg and on the right leg down to the foot. The temperature the day previously had been 98.6° F. by rectum. The child nursed well and Dr. Pisko said he did not see where the scleroderma could fit in, and it was getting better under treatment.

GLOSSITIS AREATA EXFOLIATIVA. Presented by Dr. Ochs.

The man was 44 years old and had had a lesion confined to the dorsum of the tongue for the past 15 years. It started as a slightly scaly patch which spread peripherally and was covered with a whitish to a yellowish-white coating. The lesion at times cleared up spontaneously, at other times it partially cleared up under different forms of treatment, as nux vomica, mouth washes, etc., and it seemed that at each treatment he was at first benefited but always lapsed back to the old condition. Dr. Ochs presented this case to the Society several years previously and it had progressed ever since. Dr. Gottheil took the patient under his care at one time and treated him thoroughly with anti-specific treatment. The Wassermann reaction had always remained negative. The disease would start on the dorsum of the tongue and it would quickly spread peripherally. The layers were sharply defined and underneath them there was a cracking, and if the patient took anything sour, like vinegar, or something hot, he had excruciating pain. Smoking, however, had had no effect on him. He stopped smoking for a long time, but this had no effect on the disease, nor did it ever exaggerate the condition. Dr. Ochs presented the case as one of glossitis areata exfoliativa.

DISCUSSION.

Dr. WISE said the lesion impressed him as being one of ordinary leukoplakia.

Dr. HOWARD FOX agreed with Dr. Wise that the patient presented typical patches of leukoplakia of the tongue and buccal mucous membrane. The negative Wassermann reaction was no argument against such a diagnosis as the reaction was frequently negative in cases of leukoplakia.

Dr. GOTTHEIL said he had watched the case a long time and had never seen the marked changes in the lesion which Dr. Ochs had noticed, but he did not object to his diagnosis.

Dr. McMURRAY agreed with the diagnosis of leukoplakia and thought this accounted for the peeling off of the surface.

Dr. Ochs said he would like to ask the gentleman why had the lesion never entirely disappeared under treatment, but sometimes disappeared spontaneously? It remained entirely away for a period of over a year. The tongue was absolutely clear and no trace of the disease could be found. Suddenly the man got an attack of pseudo-angina pectoris and the lesion started again and had now persisted for four years. The speaker could not conceive of a straight case of leukoplakia that would disappear and would return, to remain. Stelwagon described the condition of absolute typical rings that started in the centre of the tongue and worked down to the tip of the tongue. Then he described a condition of two rings, one within the other. This exactly fitted the case presented. Dr. Ochs did not understand how a case of leukoplakia could disappear, to remain away for a year.

ULCERATIVE NECROTIC RADIO-DERMATITIS. Presented by Dr. GOTTHEIL.

The patient, a male adult, had complained of pains of a peculiar nature in the abdomen, which was not diagnosed. Finally, some doctor thought they were

due to an enlargement of the spleen and he was subjected to treatment for this. He received at least fifty exposures of the X-ray and at that time the X-ray technique was in a very undeveloped stage. After this treatment was stopped he developed a redness over the abdomen which was treated for a long time without result and led to the formation of red spots. He always suffered more or less continually from abdominal pains. Dr. Gottheil first saw the patient on January 16, 1914. He then said that six weeks before, the lesion had begun to get very sore, and when the speaker examined him, the entire lower front of the abdomen was covered with telangiectases and a number of necrotic foci, all very sore. If it was a radio-dermatitis, Dr. Gottheil said he did not see how a radio-dermatitis could be so long delayed. Dr. Hirsch brought him to the speaker as a case of delayed radio-dermatitis and he thought this was a very long time to have it delayed. He then put the patient on mild light treatment. The necrosis increased, the pain got worse and the entire mass became a slough and then he had to be put to bed. The treatment first employed was used with pretty good effect and consisted of distilled water injected subcutaneously, commencing with one cc. night and morning, until ten cc. were reached and then going down again. He could not sleep, could not dress and had to have opiates. He lost flesh, was hardly recognizable, and not many weeks ago thought he was going to die. The speaker never thought he would recover. During the time he was on the water treatment there was an extremely slow progression toward healing. It looked as if it would take many months or years before the sloughing would be thrown off entirely. He received local anæsthetics, etc., as the pain was terrific and quite constant.

On April 1st he was first put on serum treatment. At that time there was an accident with the tube as the centrifuge was not in working order and there was a loss of part of the blood. The patient got an injection of 28 cc. of serum one week later. The man came to Dr. Gottheil's office looking better and feeling better. He could sleep and eat, sleeping 7 or 8 hours without any ache at all. The pains nearly left him. Healing had progressed half an inch from the margins. The slough was almost separated. On that day there were drawn 200 cc. of blood, and 80 cc. of serum were injected. Formerly he could not stand a mild local application of balsam Peru, which caused him the most excruciating agony. Now he received a 2% solution of balsam Peru. He received his third injection of 100 cc. on April 15th. The man now went down to business and did some work every day. He got no opiates at all and enjoyed his food. The condition changed after the first injection.

DISCUSSION.

Dr. Ochs said he had had the privilege of seeing this case, and wanted to say that he never saw such a change in a patient as had been shown here. When the speaker first saw the man there were punctate pustulating lesions and the pain described.

Dr. HOWARD FOX thought the result that had been obtained was extraordinarily good. The lesion on the abdomen looked as if it had been skin grafted. He thought Dr. Gottheil had done well in bringing the serum treatment to the notice of dermatologists in America. He had seen Dr. Gottheil's original cases of psoriasis and those treated shortly after by Dr. Fordyce at the City Hospital, and had been favorably impressed with their results. Dr. Fox had treated twelve patients by the serum method with most gratifying results, especially in cases of psoriasis. He had given each patient three injections, at intervals of from four to five days, of active serum. Fifty cc. of blood was withdrawn for each treatment and 20 to 25 cc. of serum reinjected into a vein within a half hour. There were no local or general reactions of any kind following the use of the serum. The patients with psoriasis were treated with chrysarobin ointment, generally in 10% strength, at the conclusion of the serum treatments. In addition, in most

of the cases, the lesions were also covered with rubber cloth. One result he wished to speak of in particular. This occurred in a young woman who had suffered for twenty years from psoriasis, being never entirely free from the disease. He had previously treated this patient for several years by various methods. He had used chrysarobin in ointment, in collodion and covered by rubber cloth, but had never been able to do more than partially improve the lesions. Two months after the combined serum and local treatment, every vestige of the disease was gone, the dermatitis from chrysarobin had cleared up and the patient was most delighted with her condition. In one case of eczema and one of dermatitis herpetiformis, no results were obtained.

DR. GEYSER said that after all radiation ceases, the tissues break down in exactly the same manner as in this case. The lesions become exceedingly painful, tender to the touch and tender to everything that is put upon them, and the more one treats these lesions the worse they seem to get. This was the first instance which he had seen that did anything toward curing lesions of this kind. He saw a case like this some time ago on Staten Island. These lesions, he said, do not break down completely, because the individual cells have not been totally killed; they were simply injured, and under this injured condition the cells stand up until something happens that devitalizes the general system, and this may happen one or ten years after exposure. The patient whom Dr. Geyser saw on Staten Island had had his lesion three or four years, and finally this man cleared up on rigorous diet by excluding everything from his diet detrimental to the lesion, which took two or three years. The method shown at the meeting seemed to be a short step toward the securing of the same result.

DR. FOX stated that, in regard to the use of active or inactive serum, Spiethoff failed to obtain results in some cases by the use of active serum from the patient. He then tried inactivated serum (from another person) and obtained good results.

DR. SATENSTEIN said the serum was used at room temperature. One must not have the utensils hot, as it may coagulate the serum.

DR. McMURTRY said he had a case of epidermolysis bullosa which was treated with several injections of the inactivated serum. He saw the case only twice, but it seemed to him that the patient was distinctly improving.

DR. SATENSTEIN said Dr. Fordyce told him of a case he had treated of dermatitis herpetiformis in the daughter of a physician. The girl had been under her father's care and that of other men for four years, with a severe dermatitis always present, intensely itchy, and she was running down in health rapidly. The girl was brought to Dr. Fordyce, who gave her three injections of serum, 20 cc. each time, and he said all the lesions had disappeared. The itching stopped after the first injection, and all the lesions dried up under calamine and zinc lotion.

DR. GOTTHEIL said he thought they had gotten about to the end of their rope as regarded the pathological study of these cases, and in the future they would be in closer relationship to general medicine and to the less explored parts. At the present moment he was trying a number of diseases on a purely experimental basis, such as lichen planus and dermatitis herpetiformis. The action of this serum on psoriasis was unmistakable. The whole thing, of course, was purely experimental, and opened up a great field for future work, and would perhaps result in a cure of what were hopeless dermatoses.

LICHEN PLANUS. Presented by DR. McMURTRY.

The patient was a male adult, an electrician, who, on the October previous to his presentation, was subject to many severe nervous strains. He was sent to Chicago to replace some electricians during the recent strike, and his life had been threatened. During November and the early part of December he was in a very nervous condition, and when he returned to New York at the end of December he was worn out. The eruption began at this time on his hands and wrists and

then spread up to his arms. It appeared on the legs and soles of the feet, and about one month later it assumed the appearance it had at the time of being shown. It was a well-marked case of lichen planus, and it was also seen on the tongue and cheeks. The patient had been under the treatment of a general practitioner and had had various forms of tar ointment, salicylic acid, Lassar's paste, etc., without any effect. At the time of presentation he was getting applications of Lassar's paste and mercury internally. On the legs the lichen planus assumed the hypertrophic form. There he had a thick, white scaling.

DISCUSSION.

DR. WEISS said it was very rare to find lichen planus of so acute a character. It was mostly a chronic or sub-chronic affection, rarely so generalized over the body. It would be interesting to know the mode and effect of the treatment.

ERYTHEMA MULTIFORME VESICULOSUM ET IRIS. Presented by DR. WEISS.

The patient, M. T., was 65 years old, a widow. About six weeks previously she noticed red blotches on the forehead which burned and itched very much and then extended over the entire body. The scalp showed seborrhœic eczema in spots, with yellowish, greasy scabs. The forehead showed large, deep-seated papular lesions in the form of swellings, inflammatory in character. On the arms, legs and body she showed an eruption of a mixed type, consisting of reddish and violaceous papules, some with depressions in the centre, forming the type of erythema iris and marginatum, some showing vesiculation. There were some constitutional disturbances in the form of anorexia, malaise and pains in the joints. Numerous cases of the erythema multiforme group had been observed by the speaker lately. It seemed as if the unusual cold spring weather had caused an endemic of it.

LUPUS VULGARIS. Presented by DR. WEISS.

Fanny T., 21 years old, observed her lesion, the size of a quarter dollar, about twelve years previously. It was situated on the left temple. It had been treated abroad by the galvano-cautery, without diminishing in size. It had been stationary since, and consisted of a red elevated spot, somewhat compressible, with a slightly nodular border, showing slight scarring from the cautery in the centre.

DISCUSSION.

DR. McMURTRY and DR. PISCO believed the case to be one of lupus vulgaris.

DR. WEISS said the turgescence of the lesion, its compressibility and the telangiectases around the border, made it look like an angiomatous nævus. As the lesion remained stationary for twelve years, a condition lupus rarely stays in, the existence of an angiomatous condition could be assumed.

MORPHŒA. Presented by DR. BECHET.

The patient, a female aged 30, stated that the lesion had been present on the back of the neck for four years. She presented for examination a lesion with a marked atrophic centre, and a sharply margined, irregular border of a lilac color. There was some dermatitis in the centre of the lesion, from some previous application.

DISCUSSION.

DR. WISE suggested that the diagnosis of atrophia cutis maculosa was more appropriate in this case. The lesion was soft, wrinkled, velvety to the feel, whereas

in morphea the skin was indurated, board-like and firm to the touch, and there was no wrinkling of the skin.

Dr. GORTHEIL said he thought there were two stages of disease in this patient. He presented a patient, female, some time ago, with almost similar lesions, and one sort was distinctly hard in the sclerodermatous stage and the case looked very much like the one being shown.

Dr. BECHET could not agree with Dr. Wise's diagnosis of atrophiea cutis maculosa; the whole appearance of the lesion, in his opinion, was typical of morphea—the lilac border, with surrounding area of pigmentation, was marked, and while the usual hardness of a patch of circumscribed scleroderma was absent, it might have been possible for it to have entirely disappeared, as the lesion had been present for a long time.

ADENOMA SEBACEUM. Presented by Dr. BECHET.

The patient, a female aged 18, first noticed the eruption when she was about 5 years of age. There was at first a rapid increase, but for the past ten years the condition had remained stationary. She had always been in good health. No other member of the family had ever had any disease of the skin. She presented for examination an enormous number of small tumors, symmetrically distributed over the face, particularly at the sides of the nose. In size, the lesions varied from a pin head to a split pea, were bright red in color, and rounded or convex in shape. Much of the skin between the tumors was irregularly streaked with dilated capillaries.

DISCUSSION.

Dr. PISCO said he thought all of the gentlemen present would recall the two beautiful cases presented by Dr. Ochs, of adenoma sebaceum, which occurred in two brothers and were presented at Dr. Geyser's residence.

Dr. HOWARD FOX said he would like to mention two cases of this disease which occurred in a mother and daughter. The patients were observed last summer during the International Congress in London. They were seen upon the street at the close of one of the clinics at which they had arrived too late to be presented and have their cases recorded.

TRAUMATIC DERMATITIS WITH FOLLICULITIS OF THE RIGHT THIGH. Presented by Dr. WEISS.

The patient, M. A., male, was 40 years old and married. Eight months previously the lesion commenced with a small, itching patch, and gradually extended. About four months ago he showed an eczema seborrhœicum on the right naso-labial region, also behind the right ear. The former showed an erysipeloid condition. On the posterior aspect of the right thigh was seen a large patch about six by ten inches, showing a central clearing and a peripheral extension of papular and vesiculo-pustular lesions, pierced by a hair. The patient was getting well under a 2% chrysarobin ointment.

TERTIARY SYPHILIS OF THE NECK AND DUHRING'S DISEASE. Presented by Drs. MacKEE AND WISE.

The patient was a male adult who applied for treatment at Dr. Fordyce's clinic for an intensely pruritic disease, of about eight months' duration. Examination showed numerous vesicles, papules and wheals scattered over the trunk, arms and legs, of dermatitis herpetiformis. On the side of the neck there was an active syphilitic process which had recently healed under salvarsan and mer-

cury. He stated that the lesion on the neck had begun about six years ago in the form of nodules, which later became confluent and ulcerated. There was no itching in the lesion of the neck. The Wassermann reaction was strongly positive. When presented, the patient showed the pigmented scars of healed lesions of Duhring's disease.

DISCUSSION.

DR. GOTTHEIL said he did not doubt the tertiary syphilis, but was not so sure about the scars of the Duhring's disease, for to be sure of it he would have to see the patient in the active stage.

GUMMA OF THE LIP, SIMULATING CHANCRE. Presented by DR. BECHET.

The patient, a male aged 35, presented for examination a greatly elevated, ulcerated lesion, about one and a half inches in diameter, and situated on the median line of the upper lip. The base was extremely indurated and the lesion markedly resembled a chancre. He gave no definite history, other than that the lesion had been present for several months. The Wassermann reaction was strongly positive. There was no general eruption, or marked cervical gland enlargement, even after several weeks of observation. A smear from the lesion showed an absence of spirochæta.

DISCUSSION.

DR. GOTTHEIL thought this was a tertiary syphilide of the frambesiform type.

DR. MOUNT said that although the patient had no knowledge of having had a chancre at any time, still he did admit having had gonorrhœa some years ago. His gonorrhœa might have been associated with a urethral chancre.

DR. HOWARD FOX said that at a distance the lesion looked strikingly like a chancre. The long duration, absence of enlargement of the pre-auricular glands, and of other symptoms of early syphilis, were strong evidence that the lesion was a gumma and not a chancre of the lip.

DR. McMURTRY thought the unusual condition of the lesion might have been caused by a secondary infection, probably a staphylococcic one.

CASE FOR DIAGNOSIS. (SARCOMA?) Presented by DR. BECHET.

The patient, a male adult, stated that the lesion on the buttock began two and a half years previously, and seemed to originate as a "pimple," which had been present for some time. He presented for examination a large lobulated mass, several inches in diameter, with a hard, board-like base extending into the subcutaneous tissue for about an inch beyond the border of the lesion. There was no history of syphilis. A Wassermann reaction proved weakly positive; because of this doubtful reaction he was given active specific treatment for four months, with no effect upon the lesion. Another Wassermann recently taken proved negative. The case had been previously shown by the speaker at a recent meeting of the section on Dermatology at the Academy of Medicine.

DISCUSSION.

DR. McMURTRY said he saw the case a few evenings previously at the Section on Dermatology at the Academy of Medicine. He thought it might be a case of tuberculosis cutis with secondary keloid formation. The sections present showed a picture of spindle-cell sarcoma very beautifully.

DR. BECHET said that the pathologist at the Skin and Cancer Hospital made a diagnosis of spindle-celled sarcoma.

CHANCER OF THE LIP, MILIARY PAPULO-PUSTULAR SYPHILO-
DERM. Presented by DR. BECHET.

The patient, a male adult aged 22, stated that two months previously he first noticed an indurated lesion on the mucous membrane of the upper lip. This rapidly grew in size, and one month later the general eruption began to appear. He presented for examination an ulcerated lesion on the inner side of the upper lip, with an indurated base. Several mucous patches on the tongue and a specific pharyngitis were concomitant symptoms. The cervical adenopathy was extremely pronounced. On the penis and anal region were a number of moist papules. The cutaneous surface of the body, particularly the arms and legs, was covered with an aggregation of small, ham-colored papules and pustules.

REVIEW

OF

DERMATOLOGY AND SYPHILIS.

Under the direction of

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JOHN H. STOKES, M.D., Ann Arbor.

HARVEY P. TOWLE, M.D., Boston.

DEUTSCHE MEDIZINISCHE WOCHENSCHRIFT.

(July 16, 1914, xl, No. 29.)

Abstracted by CLARENCE ALLEN BAER, M.D.

TWO ADDITIONAL CASES OF RODENT ULCER HEALED BY MEANS
OF COPPER AND QUARTZ LAMP. H. WEISS, p. 1478.

IS THERE A PATERNAL TRANSFERENCE OF SYPHILIS? FRITZ
LESSER, p. 1479.

Lesser answers Franz Bruck's article (xl, No. 24).

(*Ibidem*, Aug. 6, 1914, xl, No. 32.)

CONCERNING THE COAGULATION REACTION IN SYPHILIS. L.
HIRSCHEFELD AND R. KLINGER. p. 1607.

The authors give a detailed explanation of the technique of the coagulin reaction. The reaction in syphilis rests upon the determination of the coagulation

activity of an organ extract after being digested with serum. Syphilitic sera have the property of destroying the enzyme in the extract so that no coagulation occurs. A further report is to follow.

(*Ibidem*, Aug. 13, 1914, xl, No. 33.)

THERAPEUTIC EXPERIMENTS WITH EMBARIN IN NERVOUS DISEASES. ALFRED NEUMANN, p. 1657.

Embarin is a soluble mercury preparation which is painless and rapidly absorbed. It is very useful early in nervous diseases of syphilitic origin. The early stages of tabes and neurasthenia, so often the precursors of progressive paralysis, were greatly influenced by this preparation.

IMPROVEMENT IN THE TECHNIQUE OF USING EMBARIN. MAX CORDES, p. 1659.

Embarin is recommended as a painless preparation containing 3% solution of mercury with $\frac{1}{2}\%$ akoin as anaesthetic. Infiltrations result from its use and albumin in the urine does not appear oftener than after other mercury preparations. Cordes recommends beginning with small doses and gradually working up the dose so that the organism becomes accustomed to the drug.

THE QUESTION OF DIRECT PATERNAL TRANSMISSION OF SYPHILIS. FRANZ BRUCK, p. 1661.

Answer to Fritz Lesser (xl, No. 29).

(*Ibidem*, Aug. 27, 1914, xl, No. 35.)

THE WORTH OF THE WASSERMANN REACTION. MAX RHODE, p. 1683.

Rhode maintains that the worth of a Wassermann reaction depends on the nature of the extract used as antigen, i.e., whether the extract be of syphilitic origin or made from normal organs.

ANNALES ET BULLETIN DES SCIENCES MÉDICALES
ET NATURELLES DE BRUXELLES.

(October, 1913, lxxi, No. 10.)

Abstracted by R. C. JAMIESON, M.D.

THE FREQUENCY OF SYPHILIS IN VISCERAL AFFECTIONS. O. WEILL, p. 243.

This article is a statistical study and the author finds syphilis far more frequent in visceral affections than had been imagined, one adult out of every four in the hospital being affected. These statistics also show a striking co-existence of syphilis and aortic diseases, hemi- and paraplegia, meningitis, etc., as well as demonstrate the value of the Wassermann reaction.

(*Ibidem*, January, 1914, lxxii, No. 1.)

SYPHILIS AND CUTANEOUS REACTIONS. J. DESNÈRE, p. 14.

The author gives further results with the luetin reaction, stating that there are many contradictory results, but that this reaction is uniformly negative in

all other diseases than syphilis while it is regularly positive in all tertiary cases of the gummatous type. He considers much of the discrepancy in the results to be due to the personal equation in the interpretation of readings, and also to the fact that too large doses will cause an irritative reaction.

A pustular reaction may be caused by both control and luetin in many cases which are not tertiary, but he thinks that the skin in tertiary syphilis has not lost its allergic properties as it probably has in tabes and general paresis.

ANNALES DE DERMATOLOGIE ET DE SYPHILIGRAPHIE.

(January, 1914.)

Abstracted by PAUL E. BECHET, M.D.

LOZENGE-SHAPED GLOSSITIS OF THE DORSAL SURFACE OF THE TONGUE. L. BROcq AND I. M. PAUTRIER, p. 1.

Brocq and Pautrier call attention to a peculiar lesion of the dorsal surface of the tongue, which they have been observing for several years. They were enabled to study the condition in about 23 cases, and state that Darier had observed a similar lesion in several instances. The site of the lesion is remarkably constant, being almost invariably situated on the dorsal surface of the tongue, in the median line and on its middle third. The lesion is longer than it is wide, and measures about 15 millimetres long, by 8 or 10 millimetres wide. It is of a light reddish color, with a glazed surface, and marked borders; as a rule the papillæ are absent; occasionally a few papular lesions are seen scattered on its surface. To the touch there is a sensation of induration. The lesion is painless, the majority of the patients consulting the observers for other conditions. It is essentially chronic, the duration in the cases reported being from five months to seven years. They were unable to classify the disease; three biopsies gave little information, simply the changes of chronic inflammation, with infiltration and sclerosis, being noted. The lesion, however, differed histologically from syphilis, tuberculosis or mycosis, nor did it resemble in the least a chronic lichen planus of the mucous membrane. Two of the cases had syphilis, but the specific treatment given did not modify the lesion.

TWO NEW CASES OF LYMPHODERMIA. A. NANTA, p. 19.

Nanta reports two new cases of lymphodermia, one of which he calls a symmetrical lymphodermia of the face and mucous membrane. This case, a man 66 years of age, had six years previously frequent attacks of pharyngitis, followed by a gradual increase in size of the maxillary and inguinal glands. After two years the glands were greatly enlarged, there was some exophthalmos, and lesions on the buccal mucous membrane. The X-rays at that time greatly improved the condition. Three months before coming under observation, the skin on the left cheek in front of the parotid became tumefied, the condition rapidly spreading to the right cheek. When first seen he had covering most of the left side of the face a hard, indolent tumor, of a dark red, violaceous color. A similar lesion about the size of an orange occupied the right cheek. Exophthalmos of both eyeballs, small tumors on the eyelids, and conjunctivæ of both eyes, were also present. The buccal and pharyngeal mucous membrane were covered with tumors, symmetrically distributed, and causing dysphagia. The palate and uvula were greatly infiltrated. All of the cervical and epitrochlear glands were greatly enlarged. A blood examination showed 4,247,000 r.b.c. and 18,600 white cells. An analysis of the cells showed:

65 polynuclear neutrophiles.	3 lymphocytes.
0.5 Polynuclear eosinophiles.	3.5 large mononuclears.
0.5 polynuclear basophiles,†††	2 Turek cells.
13.5 mononuclears.	12 atypical cells.

PREROSEOLAR MENINGITIS. CHL. AUDRY AND LAVAU, p. 29.

Audry and Lavau believe that syphilis attacks the cerebrospinal system from the time that the chancre appears and before the appearance of the secondaries. Researches made in the clinic of Toulouse showed an inflammatory reaction in the cerebrospinal fluid of nearly half the cases, in which the primary lesion alone was present. They have observed a number of cases of primary syphilis, with inflammatory reactions, and a positive Wassermann in the cerebrospinal fluid, before the appearance of secondaries, and even before the appearance of a positive reaction in the blood serum. They believe that there is no secondary incubation; that the appearance of the chancre is a local evidence of a generalized syphilitic invasion, and that its excision is absolutely useless.

PRESSE MÉDICALE.

(Feb. 21, 1914, No. 15.)

Abstracted by PAUL E. BECHET, M.D.

A NEW MYCELIUM. H. ROGER, A. SARTORY AND P. J. MENARD.

Roger, Sartory and Menard have been able to cultivate from two cases a new mycelium, morphologically different from any known type. The lesions in the two cases were nodular and confined to the lower legs. Both cases rapidly recovered after the administration of iodide of potassium.

ANNALES DES MALADIES VÉNÉRIENNES.

(February, 1914, ix, No. 2.)

Abstracted by PAUL E. BECHET, M.D.

HEREDITARY SYPHILIS AND INFANTILE ENCEPHALOPATHY. L. BABONNEIX, p. 81.

Babonneix considers hereditary syphilis as the most important causative factor in infantile brain disease. He divides the encephalopathies in two divisions, clinical and anatomical. The clinical division is further subdivided into motor syndromes and intellectual syndromes. A number of clinical case reports are inserted. He quotes a few cases of encephalopathy, reported by different investigators as favorably influenced by specific treatment.

CHRONIC AORTITIS OF ACQUIRED SYPHILITIC ORIGIN. GAUCHER AND BUIS, p. 95.

The authors review extensively the history of syphilitic aortitis and discuss the disease. In considering the aetiology, they found that the Wassermann reaction

was positive in seventy per cent. of all cases reported by different investigators. In the paragraph on treatment, they recommend the subcutaneous injection of benzoate of mercury, and the concomitant administration of potassium iodide by mouth, in large doses. Neither salvarsan nor neosalvarsan is mentioned.

ACTAS DERMO-SIFILIOGRAFICAS.

(April and May, 1913, v, No. 4.)

Abstracted by GASTON A. CARLUCCI, M.D.

A CASE OF SYPHILIS OF MALIGNANT TYPE. JUAN DE AZUA, p. 149.

TREATMENT OF SYPHILIS WITH GALYL (1116). JOSE S. COVINA, p. 152.

A report of a series of cases treated with intravenous injections of galy, an arsenical preparation discovered by Mouneyrat and studied clinically and experimentally by De Beurmann, Mouneyrat and Tanon.

The injections were of 30 cgm. of galy in a solution of 1 gm. of sodium carbonate. The writer states the results were very good, but not any better than with neosalvarsan.

A REMARKABLE CASE OF TERTIARY HEREDITARY SYPHILIS, VERY RESISTANT TO TREATMENT. SALINZ DE AJA, p. 160.

VARIOUS CASES OF UNRECOGNIZED SYPHILIS. THE DIAGNOSTIC VALUE OF THE WASSERMANN REACTION. JOSE S. COVINA, p. 187.

TREATMENT OF ERYSIPELAS BY THE INTERNAL ADMINISTRATION OF AMMONIUM CARBONATE. SALINZ DE AJA, p. 189.

The author describes his method of treatment:

1. Rest in bed.

2. Administration of a tablespoonful every two hours of the following mixture:

Ammonium carbonate	6 gm.
Water	150 gm.
Syrup	50 gm.

3. The application, three times a day, of the following to the diseased part:

Ichthyol	5 gm.
Resorbin M.	40 gm.

4. Continuation of above treatment, sometimes stopping application of ointment in order to cleanse the part with boric acid solution or tepid water. Gradual feeding up of patient and reduction of medicine to one tablespoonful every four hours.

He states that an improvement could be noticed in 24 to 48 hours. None of the cases lasted longer than five days.

He concludes that:

1. Ammonium carbonate is a specific in erysipelas, as quinine is in malaria.
2. Employed at the onset of the disease, it aborts it.

3. Used in cases of recurring type, it acts as a prophylactic.
4. To enhance the action, the application of ichthyol, 10 parts to 100, three times a day, to affected part is of great value.
5. It acts better than any other preparation in the treatment of erysipelas.

JOURNAL OF TROPICAL MEDICINE AND HYGIENE.

(Feb. 2, 1914, xvii, No. 3.)

Abstracted by R. C. JAMIESON, M.D.

TREATMENT OF CHRONIC ULCERS OF THE LEG WITH FROG FLESH POUltICE. LIM BOON KENG, p. 34.

This method has been used by the author with success in treating this condition in coolies and even in the ulcerations of leprosy. The ulcers are cleansed with sterile water, the flesh removed antiseptically from the legs and backs of the frogs, pounded in a clean mortar and applied on muslin. He does not explain its action, but states that it stops bacterial activity and hastens repair.

(*Ibidem*, May 1, 1914, xvii, No. 9.)

MYRMEKIASMOSIS AMPHILAPHES. A. J. CHALMERS and J. B. CHRISTOPHERSON, p. 129.

This is a term applied by the authors to a condition of warty growth in a case discovered near Khartoum.

The growth is remarkably rapid and may involve skin, mucous membrane, tongue, mouth, throat, etc. Numerous cryptococci were found scattered through the growths, which seemed to be composed of adenomatous tissue. The disease is readily curable by operation if the operation is done before the mouth becomes involved.

They believe the disease to be due to a cryptococcus which they think is different from any previously described, and which they term "Cryptococcus Myrmeciae Chalmers et Christopherson, 1914."

The lesions do not recur after removal, there is no metastasis. The pathology and morbid anatomy is given at length, too minutely for abstracting. The disease does not endanger life unless it involves some vital organ, such as the larynx, and is easily removable by operation.

ANNALS OF OPHTHALMOLOGY.

(July, 1914, xxiii, No. 3.)

Abstracted by CLARENCE ALLEN BAER, M.D.

PARENCHYMATOUS KERATITIS. ADOLF ALT, p. 445.

Syphilis can be demonstrated in 90 per cent. of all cases of parenchymatous keratitis. Rarely seen in acquired syphilis, it is almost always due to hereditary syphilis. Both eyes are usually attacked, although not simultaneously. The second eye invariably becomes affected, in spite of vigorous treatment. A one-sided parenchymatous keratitis is seen only in acquired syphilis, and is preceded by

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trauma. The author gives a description of the history of a typical case. Relapses occur only occasionally.

A CASE OF PAPILLARY IRITIS FOLLOWING AN INJECTION OF SALVARSAN. CLARENCE LOEH, p. 451.

A case is reported in which a papillary iritis occurred in spite of one salvarsan injection.

SOME OCULAR SYMPTOMS OF SYPHILIS OF THE NERVOUS SYSTEM. MEYER WIENER, p. 460.

Twenty per cent. of all ocular muscle paralyses are due to tabes; and twenty per cent. of all cases of tabes have involvement of the ocular muscles. The author parallels the histories of two cases: (1) a case of sarcoma of the choroid and a perithelioma of the orbit, and (2) a case of syphilis of the brain diagnosed by means of the Wassermann reaction and subsequently benefited by antisyphilitic treatment.

SALVARSAN AND THE EYE. JOHN GREEN, p. 469.

The author considers the effects of salvarsan on eye conditions and the contradictions to its use.

THERAPEUTICS OF OCULAR LUES. WM. F. HARDY, p. 463.

This is a consideration of the general treatment of syphilis with special reference to the eye.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

(July 25, 1914, lxiii, No. 1.)

Abstracted by WILLIAM H. BAUGHMAN, M.D.

THE NECESSITY FOR THE ESTABLISHMENT OF A NATIONAL LEPROSARIUM. W. C. RUCKER, p. 297.

THE DUTY OF THE GOVERNMENT IN LEPROSY CARE AND CONTROL. ISADORE DYER, p. 298.

Both papers advocate the establishment of a national leprosarium, also give the text of bills providing for the same.

A COMPARISON OF CHOLESTERINIZED AND NON-CHOLESTERINIZED ANTIGENS IN THE WASSERMANN REACTION. CHARLES C. W. JUDD, p. 313.

Judd gives the results, with tables, of Wassermann reactions, made in duplicate, of blood serums and spinal fluids, using as antigens the acetone insoluble lipid extract of beef-heart of Noguchi and the cholesterolized alcoholic extract of beef-heart prepared after the method of Sachs. The series consisted of 379 blood serums and 21 spinal fluids; 71 per cent. of serums and 66.66 per cent. of spinal

fluids gave identical results. In 29.05 per cent. of serums and 33.33 per cent. of spinal fluids, there was a disagreement in results. Of those showing differences in complement fixation, 95.4 per cent. gave greater fixation with the cholesterinized antigen, while 4.6 per cent. gave greater fixation with the non-cholesterinized antigen. No spinal fluid gave the latter result. The standard cholesterinized antigen Judd considers to be "an ideal artificial antigen"; detecting more positive luetic cases than the Noguchi non-cholesterinized antigen; resisting extinction longer by therapeutic measures; and having good keeping properties.

(*Ibidem*, Aug. 1, 1914, lxiii, No. 5.)

THE USE OF SALVARSAN IN NON-SYPHILITIC DISEASES. W. H. BEST, p. 375.

A wide variety of cases treated with salvarsan "with the idea of what result will be obtained, rather than what result should be obtained," showed uniform improvement or cures in some few cases, indifferent results in others, and no influence in a third group.

A FEW PRACTICAL POINTS ON THE TREATMENT OF LEG ULCER. A. RAVOGLI, p. 387.

Ravogli's article deals with the causative factors, the gross and microscopical pathology, and the method of treatment, used by himself and others, in cases of leg ulcer.

DIPHTHERIA OF THE SKIN OF UNUSUAL TYPES. F. C. KNOWLES AND L. D. FRESCOLN, p. 398.

Following a discussion of the mode of infection, the various types of diphtheria of the skin, the differentiation of the Klebs-Loeffler and the Hofmann bacillus, and the classification according to the method of Westbrook, Wilson and McDaniel, the authors report two cases of the bullous-impetigo type of diphtheria of the skin, occurring in sisters. Both cases, in addition to the skin lesions, had white membranes on the tonsils and constitutional symptoms. The Klebs-Loeffler bacillus and the staphylococcus were isolated from skin and throat lesions in the two cases.

(*Ibidem*, Aug. 8, 1914, lxiii, No. 6.)

A STATISTICAL STUDY OF SYPHILIS. THE RELATION OF ITS SYMPTOMS TO SUBSEQUENT TABES DORSALIS OR GENERAL PARALYSIS. CHARLES J. WHITE, p. 459.

The records of 1016 cases of syphilis showed that 8 developed tabes, 7 men and 1 woman; and 1, a man, general paralysis; 3 had previously exhibited late cutaneous manifestations. Eighteen out of 500 cases of tabes had previously exhibited late cutaneous manifestations, 61 per cent. having had the first symptoms of tabes within 15 years after the first syphilitic manifestations. Of 178 cases of general paralysis, 2 had had cutaneous manifestations.

The onset of symptoms of general paralysis varied from 1 year to 30 years after the first syphilitic manifestations.

SYPHILIS IN THE AMERICAN NEGRO. H. H. HAZEN, p. 463.

Syphilis is probably more prevalent among negroes than among whites; the same condition exists regarding school-children.

Extra-genital chancres and persistent palmar lesions are rare, the most com-

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mon skin lesions being papular syphilides. Gummata, aneurysm and aortic insufficiency are more frequent, paresis equally distributed, and tabes is less common among negroes.

OBSERVATIONS ON THE PATHOLOGY OF SYPHILIS. HENRY J. NICHOLS p. 466.

Nichols confines his discussion to the following theories:

(1) The establishment of the foundations of late lesions of syphilis by the early localization of the spirochæta.

(2) While all strains of the spirochæta pallida are probably capable of infecting various organs, certain strains have a predilection for particular organs.

(3) Invasion of the reproductive organs, particularly the testicle, if at all, takes place during the early stages of syphilis and is persistent.

(4) An active lesion tends to inhibit the development of lesions in other organs at the same time.

(*Ibidem*, Aug. 15, 1914, lxiii, No. 7.)

CEREBROSPINAL EXAMINATIONS IN "CURED" SYPHILIS, CASES IN WHICH THE BIOLOGIC METHOD AS A CONTROL HAS BEEN USED. B. C. CONNORS, p. 550.

Report and discussion of a number of cases examined, and the method of treatment used.

THE TREATMENT OF SYPHILIS OF THE NERVOUS SYSTEM. JOHN A. FORDYCE, p. 552.

Clinically, the majority of cases of nervous system involvement occur from 3 months to 1 year after infection. Laboratory findings of some workers indicate involvement of the nervous system in many cases during secondary syphilis, though the author's experience does not concur with the high percentage of cases of early nervous involvement found by others. A small minority of syphilitics develop obtrusive nervous symptoms. The majority of those with meningeal involvement must undergo cure either spontaneously or with insufficient treatment. Both clinical and laboratory findings tend to indicate that the determining factor in the development of late nervous syphilis resides in the infecting agent. Many syphilitic nervous conditions respond to the old methods of treatment; though some, especially the so-called parasyphilitic affections, do not.

The author emphasizes these points in discussing the treatment of syphilis. (1) Accurate diagnosis with serologic findings. (2) The necessity of prolonged treatment. (3) Avoidance of too large initial doses until the susceptibility of the patient has been determined. (4) Persistence in treatment in spite of absence of amelioration following the first few injections. The treatment should be carefully controlled by both clinical results and lumbar puncture. Very small doses of salvarsan are given by the Swift and Ellis method, as modified by Dr. Hanson S. Ogilvie; these injections being preceded by mercurial injections and intravenous injections of salvarsan. The case reports indicate good results from the above treatment.

THE SERO-ENZYME TEST FOR SYPHILIS. F. W. BAESLACK, p. 559.

The author, following the methods of Abderhalden in his test for pregnancy, applies the sero-enzyme test to the diagnosis of syphilis. He claims that if syphilitic testicular tissue is used it "is probably a specific reaction," and that "the reaction is more specific than the Wassermann reaction."

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THE INTRAVENOUS ADMINISTRATION OF MERCURY. JEROME KINGSBURY AND PAUL E. BECHET, p. 563.

Using the bichloride and the benzoate, the rapid removal of certain syphilitic lesions was obtained in cases treated by the intravenous injections of these mercurial preparations. The authors advocate its more frequent use in selected cases.

(*Ibidem*, Aug. 22, 1914, lxiii, No. 8.)

AN UNUSUAL CASE OF BROMODERMA OF THE LEG. LUDWIG WEISS, p. 635.

A very interesting account of a case under the author's care, together with a painstaking review of the relevant literature.

FAVUS AND RINGWORM OF THE NAILS. MILTON H. FOSTER, p. 640.

Observations of these two affections seen by the author in his work among aliens entering the United States. The article is beautifully illustrated and is a valuable paper on the subject.

(*Ibidem*, Aug. 29, 1914, lxiii, No. 9.)

SUMMARY OF RESEARCHES IN PSORIASIS. J. F. SCHAMBERG, A. I. RINGER, G. W. RAIZISS AND J. A. KOLNER, p. 728.

The authors, carrying out their researches according to the theory that psoriasis is due to a parasite, had only negative results on investigating scales, serum, skin and blood. More hopeful results, however, were obtained when they proceeded on the theory that it is due to faulty metabolism. An apparently definite relationship was found between protein metabolism and the course of the psoriatic eruption, a high protein diet being accompanied by the spread of the eruption. One case of universal psoriasis has remained practically free from psoriatic lesions since being put on very low protein diet. The reactivity of the skin toward external medication is also altered. Chrysarobin is found to be the most efficient of drugs in the treatment of psoriasis.

RADIUM. ITS USES AND LIMITATIONS IN SKIN-DISEASES. FRANK E. SIMPSON, p. 737.

Simpson uses various types of varnish applicators, either naked, or with aluminum or silver screens. Good results are obtained in selected cases of epithelioma, lupus erythematosus and angioma.

THE RELATIVE VALUE OF RADIUM IN DERMATOLOGY. ARTHUR F. HOLDING, p. 741.

Ease of application, lack of pain, good cosmetic results and lack of danger favor the use of radium. The factors opposing its use are its cost, the time consumed, and the superficial healing of a lesion with a possible accompanying deep extension of the process.

RADIUM AND THE ROENTGEN RAYS IN RADIOTHERAPY. THEIR USES AND LIMITATIONS. WILLIAM S. NEWCOMET, p. 743.

The therapeutic usefulness of either depends on the degree of penetration desired, the particular disease under treatment, individual idiosyncrasy and adapta-

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bility. There are certain conditions, however, in which both are equally efficacious. Also there are other conditions in which their combined use produces the most beneficial result. Radium rays have a therapeutic effect on chronic Roentgen dermatitis.

EPITHELIOMA OF THE LIDS. CARL FISHER, p. 751.

Fisher reports that in cases of epithelioma of the lids without involvement of neighboring structures, his best results are obtained by radical excision, excision followed by actual cautery of the wound, or simple actual cautery.

(*Ibidem*, Sept. 5, 1914, lxiii, No. 10.)

THE TREATMENT OF TABETIC OPTIC ATROPHY WITH INTRASPINAL INJECTIONS OF SALVARSANIZED SERUM. A PRELIMINARY REPORT. GEORGE T. JOHNSON, L. Z. BREAKS, AND AUGUST F. KNOEFEL, p. 866.

A report of two cases showing improvement under intraspinal injections of neosalvarsan after the method of Swift and Ellis.

THERAPEUTIC GAZETTE.

(May 15, 1914, xxxviii, No. 5.)

Abstracted by CHARLES T. SHARPE, M.D.

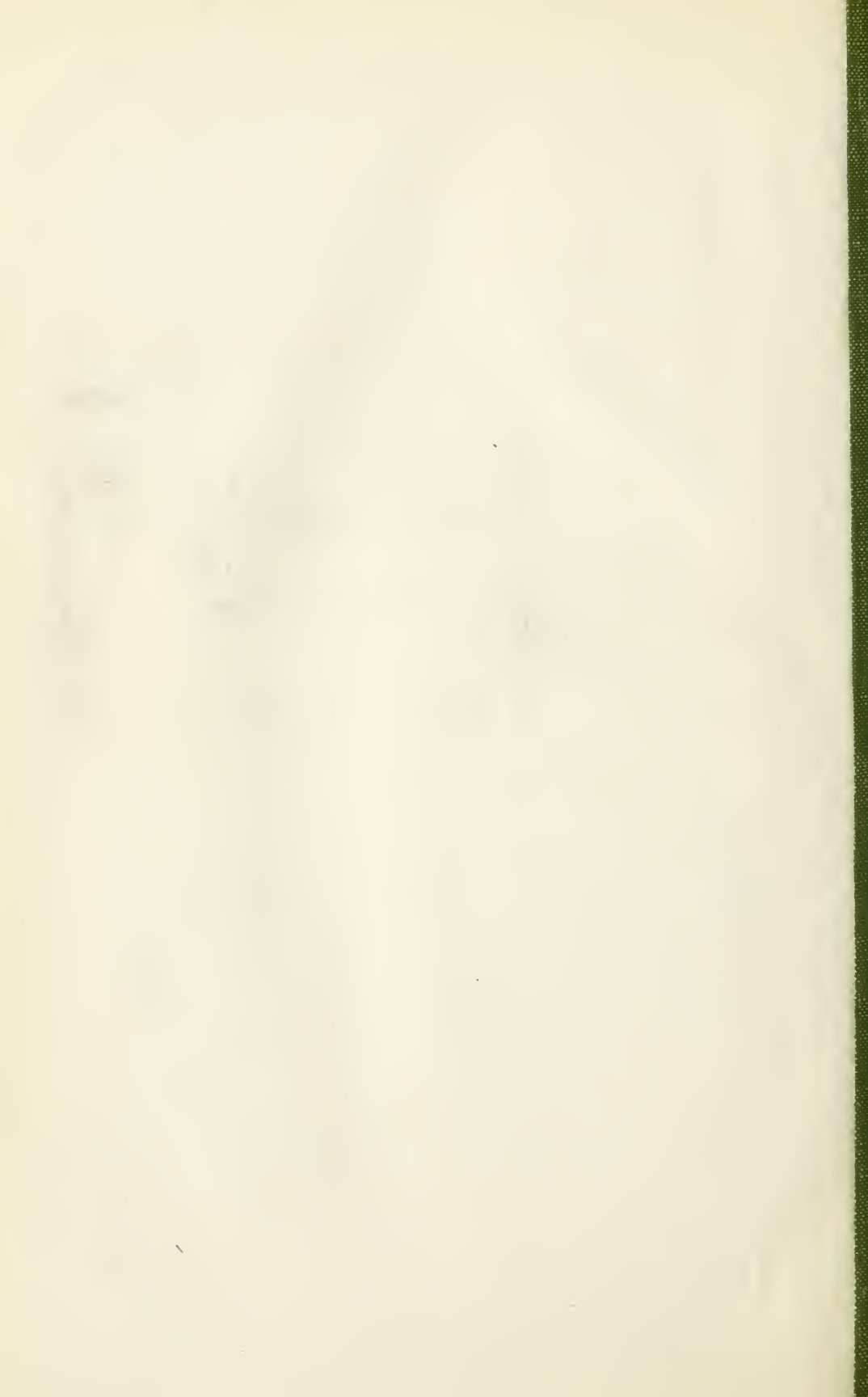
SYPHILITIC TESTS. A VIEW OF THEIR CLINICAL SIGNIFICANCE. E. P. CORSON WHITE, p. 307.

Regarding negative Wassermann reactions occurring in active syphilis and often in latent syphilis, the author states, "The reaction is not a true immune reaction, but is a symptom of syphilis and should be regarded as such. It is a symptom that is more constant and more persistent than any other, but still a symptom that may be absent; it is amenable to treatment and more quickly influenced in one individual than in another. A negative reaction, therefore, by itself means little, while a positive result excluding the known exceptions means syphilis, but does not mean that any one symptom is necessarily syphilitic, only that the serum comes from a person infected with syphilis."

"The luetin test is probably the most sensitive test in treated cases of syphilis, and is apparently specific. Its absence, therefore, seems the best criterion of cure in our hands to-day."

ERRATUM.

Plate XLIII, published in this issue, should have accompanied the article on "Colloid Degeneration of the Skin," by M. B. Hartzell, M.D., which appeared on page 683 of this volume (November, 1914, xxxii, p. 683).



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